

THE STORY BEHIND THE STORY

How do you come to write a story? In this case a wild and hopeful little story about three kids and a magical machine?

Well, it's like this . . .

Every social scientist (and the author *is* one of those fanciful fellows) dreams of the time when he'll be looking over the results of some experiment or checking tabulations of data from some survey, and be suddenly jerked out of his customary humility by the astonishing double-take that this time *he has actually found something out!* That this time he won't have to double-talk about "trends and tendencies" or mumble about things being true plus-or-minus-ten-times-their-variation. That this time he'll be able to say positively that "Man is" or "Man does"—and that he does it every time!

THE LOVE MACHINE concerns that mythical moment. It assumes that one day we *will* be able to say some definitive things about man and the social aspects of his life. It takes one of social psychology's calculated-best-hunches, assumes that it is now proven to be true, and spins a yarn around the amazement, confusion and world-turned-topsy-turvyness that would result.

Well, like most story ideas this one came out of my own experience. I was one of those careless characters who flew around dropping bombs from airplanes during the last-war-but-one. And I have since become a professional sociologist (see any good dictionary if you've never met one). Anyway, a sociologist is that be-nighted newcomer to science's crew whom the "older fellows" still regard with some condenscension.

"It's all very nice to make your 'studies' of mankind," we are told benignly. "But of course you know that you can't be really scientific about man."

We can't, yet. But THE LOVE MACHINE invites you to take a look at what just might be the "awful" consequences if we could! Like the first steam-engine, the first love-machine (or any other kind of human-process machine or principle) will have its wild and frightening and generally unsettling effects.

The big question my story poses is: Are you ready to be scientific about man? Because science is ready for you. And science has rarely failed to produce results in any given area, once it has been doggedly applied.

This is a story, then, by a social scientist who hasn't lost faith in either science or in that curious, timid and easily-talked-into-being-almost-anything little animal: Man.

INC

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the
love
machine
by . . . Jim Brown, Ph.D.

With all Earth engaged in endless hemispheric war, a young lieutenant falls in love—and thereby alters the history of the world.

THE ARGUMENT has long raged as to what is the Second Most Important Discovery of Mankind. There are those who point to the control of Fire by Early Man, or of Atomic Energy by Late War Man, as fit contenders for this title, giving as they do his essential control of Nature.

Others point to his invention of Printing or, more lately, of the Telewriter as giving man his essential control of Culture. And still others who, pointing with pride to our own time, would reserve this honor for the Trans-temporal Drive, or the Space Compactor, as giving man control of the Universe.

There are none, however, who dispute the Primacy of the Prime Invention, without which, or before which, all these others are as written in water—the invention that gave man, belatedly to be sure, but finally and irrevocably the *sine qua non* of his existence —knowledge and control of His Own Nature.

That none of us has ever, or will ever, see the actual mechanism of the Prime Invention is of

Here we have the sort of excitement an editor loves, the presentation of a first-class short novel by a brand new author. J. C. Brown, Ph.D., is the formal title of Jim Brown, author of THE LOVE MACHINE, which we boldly nominate as the outstanding science-fiction short novel of this coming year. See our editorial page for Professional Sociologist Brown's letter-to-the-editor, telling about himself, his interests and why he wrote this story.

no importance. That the machine so accidentally fashioned and whimsically named was used once and only once, then abandoned to the limbo of the culture-man-forgot does not matter. But that it divided Man, his Life and History into two parts—parts as different as night is from day—and that we, you and I, live in and shall continue to live in the brighter half is *all* that matters—abiding testimony to the unconscious genius of our Race.

. . . UGARCHEK

Inaugural Address to the
324th Congress of Human
Inventors and Engineers,
431 A. P.

I

"Love," the Colonel-Professor said, "is complete nonsense. As a word it has no place in the psychologist's technical vocabulary. As an act it has no function on a planet gripped in the centuries-old struggle between good and evil—the Right System and that of the Enemy. Courage, yes. Intelligence, yes. Honor and obedience, yes. These are terms that we, as psychologists devoted to the survival of the Hemispheric Way of Life, must learn to understand and implement in every way.

"But love, no. In the man or in the state it is a sign of weakness, an anachronism, a harking back to pre-civilized myth—myths formed before man realized his

historic destiny. Let us contemplate that destiny, my young colleagues and former students . . ."

Cadet Julius Markham stirred uneasily. "Get the old croaker," he muttered disgustedly to his left-hand neighbor, a man he trusted.

"Bet he's never even *seen* a girl," whispered Cadet-Captain Andrew Lang.

"Have *you*?" young Markham retorted, from the depths of the aching body that had stood at rigid attention for three-quarters of an hour now, and at something worse than attention for how many aching years?

"No. But by Freud, I'm *going* to see one before this week is out. I didn't fight for this psycho rating for nothing."

Markham grinned as his friend echoed his own thoughts. One more week of cadet hell, then the freedom of Psycho Officer's bars. Well, the relative freedom, anyway. How many years had it been? Years of books and drill and rats in cages and GI's in slightly bigger cages. His father had been a GI. But not Julian Markham, by Freud! He'd seen his father once, a cringing wreck of a man who had been re-processed and sent back once too often. It was then he'd decided to be on the other end of *that* stick . . .

The Colonel had finished. The platform with the bunting was empty of officers now. The formation was moving. Automati-

cally Markham followed his friend's barked orders. *Right face—left by fours—eyes on the black-serge back of the man in front . . .* Then the sunlight of the drill field again.

One more week, Markham jubilated. Then his first duty assignment, the real war, maybe his own ward and . . . *girls!* His body almost leaped out of ranks with the thought. Then, quietly, he continued his reverie—the inner life of a man in ranks.

It hadn't been hard, he grinned inwardly. Not hard at all. When he finally got out of boarding-school they had been waiting for him, even asking for him. "That bright young Markham boy," the Mothers used to say to each other when they came on Sunday afternoons after the factories closed. And said it enviously too.

He was pleased with himself of course. It was only the bright ones who got to be Officers or, better yet, Psycho Officers. The rest were going to be GI's. And not even the factories had killed *that* dread in the Mothers. You could see it every time they asked about grades. No Mother wanted her son to be a GI.

"That bright young Markham boy." He had worked for that, by sigma. The high MIQ and the tight little papers on Psychology and Manifest Destiny . . . The victory still tasted sweet in his mouth.

Markham thought of his own

Mother, a small grey shadow of those early years, thankfully confined to Sunday afternoon visits. What kind of a Girl had *she* been? It was a hard one to imagine. Even Freud had no answer to that.

Parade rest, a crew of reviewing generals—fine! He'd just have time for his favorite reverie.

And out of the shreds and patches of stolen, hastily-read books and glances over friends' shoulders at contraband photographs, young Markham put together in still another way his answer to that traditional question of all graduating cadets—what was he going to do when he met his first Girl.

Lang's hand on his shoulder wakened him from his reverie. "Who was she?" His friend grinned. "The Cadet Nurse? Or that Lieutenant in the Entertainment Corps?"

They walked away from the parade ground together and headed for the airstrip.

"I'm through with Tainment Corps," Markham said. "Even in dreams they know too lovin' much!" . . .

Second Lieutenant Markham and Lang, P.C., buckled themselves into seats in the huge transport and settled down for a long ride.

"Arizona," said Lang. "Where in sigma is Arizona?"

"I don't know," said Markham. Geography was not considered

essential in the education of a psycho officer. "But from the sound of the name and the size of those jets I'd say it was a long way."

Lang peered out of the window at the jets streaming for take off. He speculated idly on the internal physics of the things.

Markham looked for the thousandth time at the gleaming white sleeve with its thin gold braid that encased his arm. "Wonder," he muttered, "if there's any women in Arizona?"

"Mothers," Lang said, from his window. "They have factories and Mothers everywhere—outside of the Schools, of course."

"I mean *Girls*, schiz!"

"Oh, *them*," Lang said. He turned and grinned at his friend. "Better watch out, boy. We'll be psychoing *you* next."

Markham frowned. "Seriously, Lang, what kind of patients *do* you think we'll be getting out there?"

"Orders say it's a secondary Re-Processing Center. That's the cube of a Processing Center. I suppose the patients will be squares." He looked at his friend. His joke hadn't fired. "Oh, everything from tank-boys to just plain GI's, I suppose."

"There'll be secretaries," Markham ruminated.

"And the jet-girls," Lang said, putting his hand on his friend's arm. For a moment they exchanged knowing grins. And

Lang hummed softly to himself.

"Oh, *they* don't blow up," Markham said disgustedly.

"Sometimes they do," Lang said. He quoted: "Under conditions of extreme stress, especially when the subject has been exposed, through breach of regulation, to the concept of Motherhood, female pilots of the Woman's Rocket Corps have been known to require re-processing."

"Through breach of regulation." Markham echoed, and laughed.

"*And such cases,*" his friend continued quoting from a textbook, "'prove to be more difficult cases, among females, requiring more protracted therapy than the generally more unstable males.' Now what could be nicer than 'protracted therapy'?"

"Lieutenant Freud, let us go prepared to breach regulations."

"Lieutenant Jung, I am prepared."

II

Outside, the hot Arizona sand blew against the wooden building in the August wind. Away off across the windy flat a big white jet Medical Corp transport was taking off, adding more sand to the gritty atmosphere. It wasn't at all like Vermont. From a window Major Stanley Woods, called "Prof," watched it blow, scratching the white stubble of his chin with the corner of a book, his eyes reflective.

"Thirty years," he murmured thoughtfully.

"What's that, Prof?" said Doc Adams from behind his open book.

"Thirty years," Prof repeated. "It's a long time."

Doc's book didn't move. Idly Prof read the title on the worn back—*The Heat Death of the Universe*. A 19th-Century book. Old Doc never would give up. An astronomer back in the old days, he carried his beloved books around with him wherever they sent him. They'd sent him here ten—or was it eleven?—years ago. And to Prof's knowledge Doc had not done a lick of work since. A comfort though. His pessimism was of the grand old style, the *billion*-year-old variety.

The Major sighed, turned from the window and sat down at his cluttered desk.

"Not so long," said the Doc finally. "There've been longer wars."

"I know," said the Major, fingering the duty roster. "I used to dig for them, remember? But on the archeological time-scale they didn't last so long. A few layers of dried mud and broken pots and skulls and there you are. Three centuries of hell just a few pages in your notebook."

Doc Adams smiled affectionately over his bifocals at his old friend and commanding officer. *That* was always hard to remember about Prof in these days

of the hard young heroes, and harder heroines. That he was the C. O. of Research Branch, Psycho Corps.

"But thirty years," Doc suggested gently, "when you have to live them one by one . . ." He paused, listened to the wide-open jet scream of the transport passing overhead. "But it won't be much longer, now."

"I know," Prof said.

Woods read over the names and qualifications of the list of replacements—an engineer, another mathematician, a philosopher—all old men. Now what in tarnation was he to do with a philosopher? Make him Adjutant? He'd have to see the Colonel about that. He sighed. You have to do something with old professors and the Research Branch, Psycho Corps, was as good a place as any to send them.

Yes, he thought, eyes on the pasteboard ceiling, like me for instance. Archeologist, specialist on oriental warfare, as they used to call it. That's how he'd got *this* job, thirty years ago when the Third Emergency began. They'd all been fired up to do their bit for the Hemispheric Way of Life, military research for the New Way of Life.

He smiled. Psychological Warfare, they had called it then. Which was to include a bit of archeological warfare on the side. Who-fired-the-first-shot sort of thing. He sighed. He hadn't done

a lick of digging in fifteen years . . .

Doc was looking at him quizzically when the orderly came in. "Colonel's respects, sir," the youngster said after the exchange of salutes; Prof's sloppy salute for his sharp one. "She requests your presence in the East Lounge, sir. At your convenience, Professor, sir." An incurable psycho, they had kept the boy on for his bright, vacuous smile.

The Major rose and patted the kid on the shoulder. "Right, Jerry," he said. "I'll go right up."

In the East Lounge Colonel-Doctor Katrin Schroeder looked at her watch and tapped her foot impatiently. The old goat! Three hundred new cases due in from South Africa and *she* had to wait on *him*. She heard the door open and his old man's cough. She put a bright smile on her small, handsome face and turned around. "Tea, Major?"

"Why yes, if you please. You wanted to see me, Colonel?"

"No hurry, Major. Sit down," she said. She poured the tea in her best Commanding Officers' style.

Major Woods picked up his cup, peered at her over the rim. "I hear we've got a new bunch coming in."

She nodded. "Three hundred-odd, South Africa. Refusal cases."

"Pretty bad?"

"So I hear. Most of them are three-timers. We don't have enough personnel to give them

more than the once-over and send them back." She finished her tea, set down her cup. "Major," she said, "that's where you come in."

"I?" the Professor asked dubiously.

"The Research Branch. We need help. Ratio of psycho personnel, staff and patients, to combat personnel has gone up to three-point-seven in the last year."

"Three-point-seven?"

"That's right. Almost four people in or being treated by the Psychological Corps, to every one in active combat services. That's classified information, you understand."

Woods nodded.

She went on. "The situation is serious. The brass has a big job for you. You're the best equipped Psych-Research Unit in the Hemisphere. You've got more big names in every branch of the psychological sciences than anyone. You've—"

"Ex-big names," he interposed quietly.

"You've a big assignment," she went on, ignoring the interruption. "The war may depend on it. You're to invent a mechanism, Major, that will simplify psycho-processing. Something that will do electronically or chemically, perhaps, what we do now with trained personnel."

"We're to *invent*?" The Major smiled.

"That's right, *invent*," Colonel Katrin Schroeder said firmly.

"You'll get all the help you need from my clinical staff. There will be a series of briefing conferences between your people and mine starting tomorrow at fourteen hundred hours. Prepare your people for it. Any questions?"

Major Woods got up and rubbed the white stubble on his chin as he looked down at the crisp, black-haired little beauty in her white uniform with golden eagles on the shoulders. What a woman she would have made, he thought idly.

"Colonel Schroeder," he said after a moment, "I'll do my best. But I'm an archaeologist, not a magician. Inventions are born, not made."

The colonel stood up, brushed an imaginary thread from her white nylon skirt. "You are mistaken, Major," she said. "*This* one is going to be made, not born. Prepare your people, fourteen hundred hours tomorrow. That is all, Professor."

The Major stepped back the regulation two paces, saluted as smartly as he could for all his seventy-two years and about-faced out of the room . . .

The following day, at fourteen hundred hours, Doc Adams presided at the meeting.

"Gentlemen," said Doc Adams, patting the stack of papers in front of him into a neat pile. "It looks as if we are up against it this time. I'm afraid we're going to have to do some research."

"She's really serious, is she?" Browning, the neurologist, said, tugging on his white goatee.

"Yes, John, she is. Three-point-seven psycho boys to every man in combat is just about as much as the brass can take. So the Colonel's on the pan."

Around the long table the twenty-odd old men of the Research Branch glanced at each other sheepishly, tapped out pipes, shuffled books and papers. Then they focused their wandering attention on old Prof. He'd gotten them out of tougher scrapes before. All of them remembered the time they were ordered to build what the Joint Heads had hopefully called the "Mental" Atomic Bomb. And how, under Prof's skillful leadership, it had taken them only three weeks to demonstrate the "impossibility" of that one.

Prof Woods looked up ruefully from his hiding place at the end of the long table.

"Doc's right, I guess. We're going to have to work, gentlemen. She isn't kidding, this time. She got us 'unlimited research funds' for this one."

"Do you really think it's feasible?" Manichevsky the statistician asked.

"A lead pipe cinch," Prof said gloomily. "Isn't that right, Mac? Go ahead and tell them what you told me."

They all turned to Dr. Farson MacGregor, their electronics man

and at one time the hemisphere's leading authority on human electroencephalography. Until, in his later years, he had turned his attention exclusively to what the research budget called "the electronic aspects of the emotional states of the Siberian pack-rat."

The Scotsman cleared his throat noisily and began. "Yus, me lads. Doc's right. They've got us this time. The so-called processing techniques of the laddies in white have, in the last two decades, degenerated to such childish simplicity, electrically speaking, that —well, to put the matter bluntly, it wouldn't take a good encephalography man two weeks to put together routing programs for the most complicated Neo-Freudian nonsense they've got!"

"Sunk, eh?" said Norberg, the anthropologist.

"Worse," said MacGregor. "Already anticipated. Take a look at that!" He tossed a bound copy of a military journal onto the table. "Some young laddie who somehow managed to get a better scientific training than he should, wrote a paper two years ago outlining the electronic possibilities of duplicating their then-current therapy. Two years ago! Got it published too," he added sadly. "Past our best editorial people. I wrote Miller about it, after I read it, but that was too late."

Norberg picked up the journal. "*Military Police Gazette.*" He

read the title of the publication aloud.

Someone said, "So the generals have started to read."

"And the Colonel," Prof said. "She's a pretty well-trained woman, you know."

"Or was," someone said.

In the silence Norberg leafed through the journal. "Author a psych cadet. Liverpool School. Fellow name of Lang," he said.

III

Cadet-Captain Sally Barrows looked at herself in the only mirror in the dormitory. It was the big mirror where they practiced the manual of feigning. Only she wasn't practicing the manual of feigning now. In regulation pajamas she was earnestly trying to figure out if she was pretty or ugly, and from which angle. It was hard to tell. But in three more days now she'd have her wings. And with the wings would come her own plane—the Ship—and *real* war . . . and men—mechanics, armament officers, even the dreaded psycho boys, but men, at last!

"Get the 'Tainment Queen," someone said from a nearby bunk.

Sally whirled. "Hit a brace, bum!" she snapped.

The offender climbed stolidly out of her bunk and slowly assumed the chin-in, breasts-out, stomach flat, thumbs-at-seams posture of the Women's Rocket Corps.

"Now hold it. Stay there 'til I get through with my shower. And you, Jones! Report to me if she moves!"

She turned and started down the long row of bunks for the shower-room. Sally Barrows, the best-loving pilot in the loving outfit. And they all knew it. But . . . *if only I knew something about men*, she thought.

Half an hour later, freshly groomed Second Lieutenant Sally Barrows stepped into the segregated waiting room of the Women's Rocket Corps, Replacement Depot No. 113.

"Your orders, Lieutenant?" said the officer behind the reception counter.

Sally saluted smartly. The receiving officer was a tall blonde Captain, dressed as Sally was in skin-tight rocket blues.

"Second Lieutenant Barrows reporting for immediate duty, sir."

"Your ships, Lieutenant?"

"Pursuit type Four-K, Demolition Type Three-B, Kamakazi Z . . ." Her heart skipped a beat over that one, but her voice strode on: "Interceptor Type A, Drone Control Thirteen-B Missile Guider Type X-Four and—oh, yes—I've done some night interceptor work."

"Regulations allow you to specify first and second preferences, Lieutenant."

"Yes, sir."

"You understand," the blonde

captain continued, "that your choices are in no way binding on the Assignment Command."

"I understand, sir."

"Well?" said the blonde impatiently.

"Why, I—I think, sir, that my first choice might be the MG-Four sir. A very sweet ship, don't you agree, sir? And my second—"

"You're lucky, Lieutenant," the captain interrupted. "An assignment for an immediate replacement pilot to an MG group has just come in." She leaned over, began filling out the papers. "Type X-Four, too. Former pilot, male." She looked up. She was grinning. "Psychoed out this afternoon," she said.

"Yes, sir!" Sally said, returning the grin.

"You will report to your new station by nineteen hundred hours. Take a scooter. Report to Navigation for your Flight Plan. That is all, Lieutenant."

Sally saluted, turned to go, papers in her hand.

"And Lieutenant!" the Captain's voice said sharply.

"Yes, sir?"

"Loosen up that tunic."

Lt. Barrows glanced down, blushed, fidgeted hastily with the draw cords along the sides of her jacket. "Yes, sir," she muttered.

"You're not a cadet any longer."

"Yes, sir."

"You're in the *Women's Rocket Corps*, now."

"Yes, sir," Sally said smartly.

"There are *men* where you're going, Lieutenant."

"Yes, sir!"

"That is all."

"Yes, sir. Thank you, sir."

And Sally all but ran to Navigation . . . Now she would meet men! For the first time in her life she would meet a man . . .

A few hours later Pilot Sally Barrows untangled herself reluctantly from the arms of the handsome First Lieutenant from E-Flight and stood up in the dim shadows of the Ready Room.

"I'm up next, you know." She brushed back her short, tousled curls and smiled down at him.

The soft music kept on playing. His long form stirred on the deep couch they had had all to themselves. Other forms stirred and rustled on other couches. This had been the best part of the Induction Course. She hated to leave.

"I know," he said drowsily.
"Good luck, kid."

She thought of the beautiful Ship standing outside in the moonlight waiting for her. Her huge and beautiful Ship with its little socketed Guider that had been built to fit her body, as the lieutenant's arms had been.

She started for the door, turned back. "What's your name?" she whispered to the shadow lying on the couch.

"Tompkins," he said.

"Mine's Barrows. My Guider

is number X-two-S-zero-three. Watch for it. I'll be back—oh, sometime tomorrow afternoon." She ran back, stooped quickly, kissed him. Then she glanced at the glowing dial of her watch and ran out of the room, grabbing a life-pack from the rack as she ran. Now her whole body ached for the arms of the Ship!

Outside in the moonlight a peace descended on her. In the lorry with the other girls—and boys too now—of B-Flight she sat quietly, watching the tall slender silhouettes of the Ships looming and stopping and then fading again in the moonlight as they went by.

One by one the seats around her emptied as pilots dropped off the lorry beside their ships. Finally the luminous sign beside the dispersion door read X2SO3. It was her turn. She dropped out silently as the others had done and the lorry purred quietly away.

She was alone with her Ship! She stood there and just looked at it, the beautiful great rising height of it. Her first Ship! It looked gigantic standing on the great concrete disc of the dispersion point, the disc that would support it, play back the tune of Newton's Law against her mighty rising thrust, feel her weight lift and be gone. Gone, never to return. Gone, on her single flaming flight across the night-skies, to bury her plunging body deep in the warm earth somewhere on the Other

Side. But the pilot would return. The Guider would see to that . . .

Sally walked forward through the grass and put her foot tentatively on the thick white concrete edge of the disc.

It was scarred, she felt beneath her lightly slippered toe, from its many battles with the Ships. Standing there with the grass and the low trees all around she wondered if the old disc ever felt sorry to have the young Ships go, to feel the great weight lift—to be empty again.

"Why, it's sort of like a—a navel," she said suddenly aloud. And blushing furiously with another thought that peeked shyly from some far corner of her mind, she looked at her watch and added sternly aloud, "Fifteen minutes to zero. I'd better be at it."

It took her two minutes to scale the high metallic sides of the Ship, to reach the small pointed nose of the Guider that set like a jewel in the head, to glance around over the tree-tops and note with comradely pleasure the other looming jeweled heads of the other Ships in the moonlight, to lift the glassite dome of her Guider and snuggle down into the warm, body-fitting recess in the body of the Ship.

Eagerly her toes sought and found the pedals of the Guider, fitted to her exact dimensions just this afternoon. She toed them gently, felt the great fins of the Ship respond forty meters below.

Then she set about the tedious business of buckling-in. First her knees, then her thighs, then her waist, chest and shoulders, then the head-straps and forehead-rest, finally her elbows and last of all her wrists, leaving her fingers floating free to play on all the nerve-ends of the Ship.

She wriggled experimentally and felt the smooth working of the pulleys and springs and pads that would hold her suspended in complete comfort in any flight-position, for the many hard hours ahead. She sighed. She was ready. The Guider's clock in the left upper corner of her field of vision read four minutes to zero. With her right little finger she found and pressed the ship-to-ground communicator switch.

"Pilot Barrows in X-two-S-zero-three reporting Ready."

"Station to Barrows," came back in her ear. "Check time."

She watched the clock. There was a sharp tone in her ear and simultaneously the milli-hand shifted about ten degrees. She'd have to get that fixed, she reminded herself. She said to the Station, "Time checked."

"Station to Barrows. Hold ready. Three minutes plus. And Barrows—" the voice became conversational—"there'll be a Station Dance in the East Underground at seventeen hundred hours tomorrow. See if you can't make it back by then. We want you to meet the new WRC pilots.

See you later, honey. Station out." Sally grinned. It had been a man's voice, deep and low!

"Barrows to station. Barrows will be there. But watch that honey stuff. Barrows already has a boy-friend. Barrows out."

She listened to her own voice clicking out. Now she was alone.

Three minutes . . . In three minutes, she could think of lots of things. Of the dance. Of the lieutenant from Flight E. Of where her target was and what she would do there. But she wouldn't know her target until the crossover, halfway around. And who cared about dances or first lieutenants when you had a Ship to fly. So she looked up at the star-filled sky and waited . . .

Three minutes, some seconds and a few odd milli-seconds later Pilot Barrows felt her Ship shudder and rise under her. She steadied the stars with her fingertips as she shot into space—to Freedom!

IV

The Adjutant, a light colonel, finished his little speech.

". . . and so, gentlemen, you will eliminate the usual 'get-acquainted' period. Our Center is seriously undermanned. You will be assigned to duty posts in the wards this afternoon, immediately after the Colonel's Tea. And, gentlemen, the Colonel does *not* tolerate absences from her Teas. That is all."

In the back row of the little crowd of incoming officers Lieutenant Markham elbowed Lieutenant Lang in the ribs. "A *female Colonel* yet! I told you this place was going to be heaven!"

As they walked away from the briefing hut Lang rubbed his ribs and eyed his friend speculatively. "You know, Mark," he said. "I believe you're hipped on this woman-stuff. Falling for female colonels sight unseen. She's probably a dessicated old Freudian witch!"

"But *teas*, man!" Markham chortled.

"I do hope they've got some good labs," Lang continued disconsolately. "Women CO's aren't likely to be very hot on research."

"Cheer up, man. Just *think* of the psychological research that can be done over a teacup!"

A half-hour later found them armed with teacups in the midst of the Colonel's Tea. Men of all ages, sizes and all colors of uniforms, Markham noticed, spotting the Research Branch grey, stood in foot-shuffling groups, awaiting the notice of their sleek young Colonel.

"Have you seen her yet?" Lang whispered to his craning friend.

"No. But I *hear* her voice, somewhere."

Lang listened. From somewhere in the large room a high-pitched voice could be heard. It could be a woman, he supposed. But never having met one he

didn't know what a *real* woman sounded like.

The Voice was coming their way. Markham caught a glimpse of a white skirt only two mumbbling groups away, turned excitedly to his friend and whispered. "Hey, Lang! Here she comes! What's wrong, man, aren't you excited?"

Lang looked down at his tea-cup, said, "No, I just feel silly, I guess."

"Eunuch!" Mark taunted and returned to his vigil.

But not even Markham, specialist in dreams, was prepared for the actual sight of Colonel Schroeder when she finally sailed into view, trim, full little figure in its tailored whites, crisp black slightly wavy hair, bright, young, sparkling face. With girlish delight she held out her small white hand to each of her new officers.

And her voice was more like a bell note than anything Markham had imagined could be produced by larynx, tongue and teeth.

"I'm Colonel Schroeder," she said to Lang while Markham stared at her with his mouth open.

"I'm Lieutenant Lang, sir. And this," he said, turning to his speechless companion, "is my friend, Lieutenant Markham."

Markham took her hand, mumbled something unintelligible.

"Just arrived today, gentlemen?" The colonel beamed on them.

"Yes, sir," said Lang.

"Welcome to our Center, gentlemen. And," she turned her smile on Markham, "I'll have my hand back now, Lieutenant."

Markham blushed, dropped her hand.

Then she was gone.

"My God!" he said.

"What's that you said?" said Lang, interested.

"I said 'my God,'" said Markham dully, eyes on the vanishing skirt.

"What's that?"

"An ancient oath. Reserved for occasions reflecting strong emotions," Markham said automatically.

"Oh," said Lang.

They found two places on a couch and sat down. They had been sitting there quietly watching, savoring every glimpse their fortune brought them of the flitting colonel, when they were approached by a tall, grised, rock-faced captain in a grey uniform. He was followed at a short distance by an even older, greyer major.

"Allow me to introduce myself," the captain said in what Mark recognized vaguely as an old European accent. "I am Thor Norberg. Welcome to our Center. And your name is Lang, Lieutenant?" he added turning to look at Lang.

The two young men stood up, shook hands. Lang acknowledged his name.

"I overheard you speaking to

the Colonel. You're not Andrew Lang, by any chance?"

The grey major had edged into the scene. He smiled at Lang as if to help him with this difficult question.

"Why, yes, sir, I am," said Lang nervously, glancing from one to the other of his interrogators. He hadn't heard his first name used since his childhood. And he had never before seen human beings so old. They should at least be seven-star generals at this age. Still there was something pleasant about them, he decided.

"Liverpool School of Military Psychology?" the captain was asking.

"Yes, sir."

At this the grey major caught and pumped Lang's hand.

"Why, how fortunate!" he said, smiling broadly. "How very fortunate indeed! Well, well! Welcome to the Center, my boy. I'm Stanley Woods. People call me Prof. And this is Doctor Norberg. Or did he tell you? That's right, shake hands. We're going to see a lot of each other, aren't we? Now, tell me—have you met the Colonel? You have? Isn't she stunning? Yes, yes . . .

"Now tell me, did she say anything in particular to you? No? That's good. I mean, she is really a very busy woman. Charming and all that but really awfully busy. We mustn't bother her. Well! Well! Well! Come, Norberg,

we mustn't keep the boys from their tea. See you later, gentlemen. Come, Norberg!"

When they were gone Markham and Lang sat down again, stared bewildered at each other.

"What in sigma have *you* done, man?" Markham said.

"I—I don't know," said Lang a little plaintively.

"Don't worry," Markham laughed, seeing his friend's bewildered face. "They're probably psycho patients. Uncurables, no doubt. That's it—the grey uniforms! Uncurables! How *else* could they have lived to be so old?"

Lang grinned weakly. "Either that or we're nuts," he said. "Stunned by the stunning Colonel."

V

Sally Barrows woke up, stretched luxuriously and clicked off the little alarm bell ringing in her ear. The clock read ten minutes to over-the-top time. The dawn glimmered faintly on the far side of the round horizon. Above her head, if she twisted a little, she could still see stars—Aldebaran, Vega and the bright one, Venus—in the half-lit sky straight ahead. Below, the Earth was a big round ball of ice.

She yawned again, rubbed the sleep out of her eyes and studied the dimly glowing instrument panel. Atomics okay. Radar okay. Emergency circuits okay. In ten minutes the Ship would be

off automatics. Then it was all hers!

In ten minutes the target coordinates would flash up on the map in front of her, she'd cross the Line and for the first time, after many years of training for it, be actually in The War.

She still had ten minutes. Ten minutes of peace, ten minutes of grey tundra and polar ice to cross before she'd be on the Other Side of that icy ball down below.

She felt for the feeder buttons off to the right of the righthand keyboard. She punched in orange juice, hot chicken soup and a dose of those lousy stay-aware drugs regulations called for at this moment. Dipping her chin slightly she caught the feeder between her teeth and sucked lazily, gazing down at the white top of Earth.

She was nearly at the top of her orbit now. More than 10,000 meters "Up"—if you could call it up—well out of atmosphere but still within the Earth's gravity pull. Her long slow climb was over. Nothing but the down-hill plunge to go now. But here at the top it was as if she were virtually motionless. Almost bodiless, too, seeming to float high above the corporeal Earth, her body and her soul . . .

The two-minute warning sounded. She sucked faster on the feeder and gazed anxiously ahead. The Enemy wasn't supposed to have interceptors out *this* far. But you couldn't be sure . . .

Her fingers, all ten of them, rested relaxed but ready on the flying panels.

One more minute . . . She dropped the feeder from between her teeth, the last sweetish drops of the drugged solution sticky on her lips.

"Love!" she cried aloud. Her conditioning associated the thrill of battle with the word *love* and she reacted now, excitement filling her as she approached the Big Moment of her life . . .

Thirty seconds . . . Her eyes dropped to the target screen.

Zero . . . On the top . . . It was all downhill now . . . She shifted her weight slightly and stiffened her arms as a child might on a plunging sled heading down a snow-covered hillside.

The target specifications flashed before her. Course—1770. Ground distance—5,576 kms. ETA—0947 hrs. The little illuminated map-and-elevation grid on her right gave her a complete story, a slowly moving white arrow that marked her own position in three projections. A red circle in the center of the map projection indicating the Target City. A host of small green circles indicating the Alternative Targets to be used for feigning.

With a little sigh of relief Sally stretched out belly-flat in her aerial sled and began her down-hill run. Fingers lightly flicking at the controls, she pushed the Ship's nose down, gathered sud-

den speed as gravity was also added to the driving energy of her atomics. Then, just as suddenly, she pulled up again, the great Ship responding like a rearing stallion. Now it was just a game, played with a smile on her parted lips.

Vega down, Vega left, Vega to two o'clock. Horizon up, horizon tilt, horizon up-side-down. Atomics in, atomics out, atomics full to rising out. And through it all the on-rushing plunging toward Earth.

Feigning was like dancing. And Sally was the best dancer in her group. Now her whole body, hips, knees, chest and feet, flickering hands, all entered into the rhythm of that sky-dance. And, as mathematicians learned long ago, there wasn't a computer in the world that could follow or predict the wild joy of youth dancing in the sky.

Sally could imagine the Enemy periscopes—the little white arrow that was her Ship, on their boards as well as on hers, pointing now here, now there as she zig-zagged across the sky. She was laughing now, wildly, excitedly . . .

A sharp piercing tone in her ear and the simultaneously flashing red light of the radar-scope told her that the first wave of Enemy Interceptors was rising to meet her.

It did not occur to her to wonder about the Enemy. In all of her training and conditioning for this Big Moment no identity

had been given to that Enemy she would one day go out alone in her Ship to fight. She was told from the time she learned to talk about the war. And she and all of the other Youths of her world were trained to fight in that War but never told what that War was about nor the identity of the Enemy. They were merely given to understand, in every phase of their conditioning, that Youth must fight in the War. Fight to win. They were conditioned to do as told and never to ask why.

You fought to win. You might die in that fight. But if you did not fight your whole world would die . . .

The Will to Live and the Will to Love were merged. Scientists and Psychologists had not been able to stop the growth in the young of the Emotions—the natural urge to love; in the female, the maternal instinct. So they had done the next best thing, those scientists—they had conditioned Youth to associate their urge to love, their maternal feelings, with The Ship, The War, the fight against The Enemy.

Sally Barrows went out now to fight the Enemy that sought to destroy her Ship. The Ship was her Child, her Husband, Mother and Father, all rolled into one. She fought the Enemy to save her Ship.

Sally grinded. She had a diving speed now of well over 6,000 miles per hour. The Enemy had

a rising speed at best of a little less than 700. They and their proximity fuses were going to have a hard time putting a hole in little Sally's tail!

She nosed down to meet the Enemy Leader, toes and fingers tensed. There were no regulations on *this* maneuver! There couldn't be. She and the Enemy were strictly on their loving own . . .

He grew in the 'scope. Sally veered a little toward 0930. He answered, staying under, with a smaller veer toward ten o'clock. Promptly, before he was quite through with his response, she cut down for 0430. He answered with a climbing turn toward three.

She could see his face now in the little 'scope. A *man!* She laughed, stepped down hard with her right foot. The Ship rolled on its tail, atomics screamed and out of the corner of her eye she saw that she was past.

Her grin froze then as she saw the others. Three of them, on her right and left tail and quarter. Coned! Absorbed in her fight with their leader she had let them climb on her, get gravity on their side, the only real advantage she had. Her 'scopes told her they were falling fast, right on her tail!

One flight? Was that all she was ever to have? Her first fight to be her last? Then she got down to work . . .

First she wagged her tail at them just to show that she was

awake. Then she poured on all the atomics she had, to make them commit themselves too soon. When each was safely committed to his run-in—they were taking no chances on losing her now—she cut *out* her rears, cut *in* all her forward jets. Then, with heart in her mouth she watched herself float "backwards" into their range, watched them stabilize for firing. And she was their target . . .

The proximities they were going to throw, she knew, would follow her anywhere once their wiry little noses had smelled her out. Her only chance was to be *behind* them when they came out. And the one way to be behind was . . .

This!

With a sudden wrench of her body she fired all fore-and-port jets and aft-and-starboards simultaneously. Straining, the great Ship swang around like a giant cartwheel, lifting Sally to the stars again. Vega had never looked so good! Then she threw full power into the immensely powerful rear, now ground-ward jets.

Laughing and crying Sally Barrows watched the three Interceptors slip like painted toys, harmlessly down the sides of her glassite dome. She was passed! Her method had been a bit unorthodox but she had passed!

She turned nose down again and continued her earthward plunge . . .

As the Earth rose up to meet her the horizon became hard to see and for the first time in the entire flight Sally Barrows began to be conscious of her physical position—plunging head downward through the air. Real air now. She could almost feel its resistance and the coolant began to pulse between the several layers of her glassite dome.

Time to get on target.

She swung the nose playfully for the last time, centered her assigned city on the target screen and punched in the coded automatic evasion signals that would take the ship for the last few miles of its dive through the protective blanket of flak, she hoped, and finally home to her side of Earth.

VI

Then Sally Barrows began to ready herself to leave the giant Ship she had brought all this lonely way. It was a hard thing to do and the only fear she ever had was that one day her hand might freeze on that big flat ugly button that was her escape. If she did that she'd go down with the Ship. And that was the end...

But dutifully now, with the Earth rushing up at her, she started the small auxiliary atomic engine in the tail of the Guider above her feet, checked all its readings and let it idle. Then she put her hand on the red push-out button. Now she was ready. Now,

with the Ship already on automatics, all she had to do was wait.

Ninety-five miles, her altimeter said. Eighty . . . fifty . . . she was really going fast, now. At ten the flak would begin. She had to leave the ship before then. Thirty . . . twenty-five . . . twenty-three . . . twenty-two . . . twenty-one—the closer to ground she got, the better off she'd be—sixteen . . . fifteen . . . fourteen . . . thirteen . . . *PUSH!*

And the little ten-foot long glassite-and-aluminum Guider darted like a live thing from its socket and left the great Ship it had guided for so long, brainless and heartless and alone, aimed for the target it would bury itself in on the Earth below.

Sally dived, raced ahead of the great Ship, feeling the new lightness in her body. Feeling light, alive, taut and ready to slip through that umbrella of flak. She spun, just for the fun of it, and saw the great city below churn slowly up at her.

Her altimeter stood at six and one-quarter miles when she began to pull out of her dive and her speed was no less than six thousand miles per hour. She had at that moment exactly three and a half seconds to be flying straight and level before she hit, a small, harmless psuedo-bomb on the streets of her target.

She made it. In fact, more than made it. She leveled off at the less-than-tree-top level where

she really *liked* to fly, and skimmed along over the city.

There was a big pluming mushroom pile of smoke behind her and the Fighters straight ahead—Fighters of the Enemy side of Earth. To reach her own side of Earth she had to pass those Fighters.

She raced ahead of them, following roads and river beds, diving under bridges and telephone lines—a glittering, harmless flash of bright and strangely sentient light, she must have seemed to any groundling passing by below her.

No groundling saw her. But the Fighters did. They had been waiting outside the Ring of Danger for an hour. And though she showed up only now and then, an evanescent blip on their radar screens, they knew just where to find her. They had met her kind before.

Sally turned over on her back, flew with the backs of her eyeballs and watched them come.

They were good, loving good, these Enemy Fighters! Their ships were as fast, maybe faster than hers. And their guns? Well, *they* didn't have to be very good since she carried no guns at all. But therein lay her advantage; she was nothing but an atomic-pile and a girl while they were framed and armored for pounding steel.

Light and small, scarcely more than eighteen inches in diameter,

she could lead where they would not dare to follow. Turning from side to side Sally surveyed the countryside. Good! Houses, barns, power-lines, trees, everything she'd need.

Let them come, she thought.

The leader of a flight of three ships came in first, a silver streak of light with the gun-ports pouring from his nose.

She climbed up off the roadway she had been following and let him in. Good! She weaved around the first three bursts he threw at her. Then, when he was stuck on her tail and getting anxious, she dived at the streaking procession of telephone poles that lined the road and left him hanging on the second pole.

Number two was on her then.

The roadway ended and she found herself skimming over an open field. Ahead were trees. Number two, anxious to get her before she reached the trees, dived too fast—and ended with its nose stuck in the mud.

Number three flew above the trees of the small wood for a while but never did find her or the road she took, a winding country lane with ancient trees bowing courteously to shelter her from both sides.

There were three more flights of threes.

She either lost them or left them where they couldn't follow—into barn doors, the upper windows of houses, on low bridges or

the cross-arms of power lines.

This was the flying Sally loved. It was almost with reluctance that she began to think of getting home . . .

Two hours later Sally Barrows faced the fact that she was lost. She roamed the roadways and river-systems of the Enemy country looking for signs of the city she had bombed, the target at which she had aimed her Ship. From that point she knew her way home, had a flight plan all plotted. But the mushroom cloud left by the bomb her ship had carried had died away during the hour or so of her battle with the Enemy fighters.

To return to the city was dangerous, she knew. Regulations strictly prohibited it. But this was an emergency. Besides, she had to get home in time for the dance, and this would be the quickest way to find out where she was.

Regulations had, of course, provisions for such emergencies. Fly low, find an unpopulated area, they read. Land, hide the Guider from aerial search and stay hidden until nightfall. Then take a star-fix, etc., etc. She knew the regulations well.

But the dance was to be held at 1700. No time for all of that!

It was then that she stumbled by lucky accident on the city. Following a new highway and flying low, she first saw the ambulances, bright with red crosses,

flowing endlessly, like blood, out of the city. She thought: *Sickness, epidemic of some kind.*

Then she came upon the great factory, or what was left of it—the factory she had so clearly seen during her churning plunge an hour or more before. But the building seemed to have fallen down since then! What sort of catastrophe *had* taken place, she wondered. The dust bomb her Ship carried couldn't have done that!

Factories would be put "out of operation," factory workers "forced to stop working" . . . that she had been told would happen when her ship landed on target. But, conditioned as she was, she did no thinking on the subject, merely accepted what she was taught . . .

Then she came to the women. Women like herself, with breasts and long hair and beardless faces. They were sitting in a huddle by the side of the road but she got a good look at them as she flashed by. One brief flashing look, a few milli-seconds, but to eyes that could see telephone poles at 700 miles per hour it was enough.

There were young women and old women. Some of them sat, others were lying on the ground, and the faces of those who were sitting were turned toward her. Their clothing was ripped and torn so that much of their skin was showing. But the skin was not all of the same color. Some

of it was red and some black and some was the same white color as her own.

There was one other thing that Sally saw in her milli-second glimpse. With the women were small people, some no more than two or three feet high. Some of these small people were in the women's arms, some were lying in odd positions on the black and reddened ground.

Could it be, Sally wondered suddenly, that these were *Mothers*? And could it be that the small people were *Children*? The Children she had read about in biology text-books but which she, an ordinary woman, had never seen. Gradually she realized that something very, very terrible had happened to these Mothers and to their Children. That much was clear at least.

She came to the city. She had flown into it, was already over it before she realized it was there. For now there were no buildings, not even rubble. Just a great, flat, blackened plain. And there, in the center of the black plain that had been a city was the immense black hole where her Ship had gone home.

Suddenly Lieutenant Sally Barrows screamed. For suddenly, she realized what had happened to the City, the Factory, to the People. Realized that it was the bomb in her Ship that had done it all . . . Her beloved Ship . . .

It was late afternoon in Arizona

as Sally Barrows aimed her Guider toward her target in the breaking morning of the Other Side—the Home Side of Earth.

In the small wooden building that served as headquarters for the Research Branch, Prof Woods, Doc Adams, Thor Norberg and Mac MacGregor were having a quick one from a hoarded port bottle, drinking to their good luck.

VII

Across the sand flats in the Women's BOQ which Colonel Schroeder occupied in solitary splendor, that personage was taking a before-supper shower and reflecting on the late and sudden interest of her Research Chief in a certain Second Lieutenant whose name she had already forgotten. And in Post Headquarters that Lieutenant, in the company of his open-mouthed friend, was being told of a change of assignment.

"That's right," the Adjutant repeated. "You're to report to a Major Woods, Research Branch, at once. I guess they need people over there, Lang, and you'll do as well as anyone. Now get your gear."

"Me, too, Colonel?" Markham asked, hopefully stepping up to the side of his friend. "Don't they need two who'll do as well as anyone?"

"No, Lieutenant," the Adjutant said, frowning. "Your assignment

is to Ward-Thirteen, immediate duty. Get going."

"Yes, sir." Markham said, saluting smartly.

"Is that all, Colonel?" Lang asked.

"That is all. You may go."

Outside in the gritty wind they faced each other. "Well, Mark," said Lang. "This is it, I guess. Off to the grey Old Man I go."

"A good break, boy," Markham said, and slugged his friend in the arm. "Keep the rats racing."

"And you—you let me know when the first terrorized Tainment Tech shows up in your ward. Not to mention the first neurotic nurse."

Laughing, they went in opposite directions, to their new assignments.

The following day Lieutenant Lang reported for duty with the Old Men in the Research Lab. He stood at attention in front of the chief of the Research Branch.

"Well, Andy," Prof Woods said, leaning back and lighting his pipe. "Now that you've met everybody what do you think? Your name is Andy, isn't it?" he asked, peering over his bifocals.

Lieutenant Lang fidgeted, not knowing whether to stand at attention or at ease. A queer bunch of officers, these new bosses of his.

"Why, nobody's ever called me anything but Lang, sir," he answered doubtfully.

"Well, you'll be Andy here, if that's all right with you," Prof said. "And you can forget about that 'sir' business. I'm just plain Prof, Doc's Doc, Mac's Mac and so on. Okay with you?"

"Yes, sir. I mean, yes—Prof." Who ever heard of such casualness? And for officers, too! Was the world *so* different thirty years ago?

Prof leaned across his desk, said, "Sit down, Andy. Sit down."

Andy Lang sat down gingerly on the edge of the chair.

"Now," said Prof, "tell me—how do you think you're going to like it here, working with a bunch of grey-haired old men?"

"Why, I think I'm going to like it fine, sir." He hesitated, then added firmly, "The laboratory you've given me is swell too. And very complete."

"Fine, fine!" said Prof. "Now, anything you want to know about how we run things here?"

"Why, I guess I'd like to know what I'm supposed to *do* here. You see," he added doubtfully, "I've always had orders, before."

Prof smiled. "Well, yes, I suppose that is the normal thing, isn't it?" he said gently. "Let's see. Adjutant," he called to Doc, who sat at a desk in the corner. "What can we whip up in the way of orders for the boy?"

"What would you like to do, Andy?" Doc said, turning in his chair to face them.

"What would I *like* to do?"

"Yes. What would you *like* to do?"

"Why . . ." A whole world was opening up in his head and it was a long time before he found an answer. "I guess I'd like to do research, sir," he said quietly. "On—oh, lots of things."

Doc beamed at him and Prof hid his face behind a cloud of smoke.

"Good!" Doc said. "You see, that's why we brought you here." Doc was silent for a moment. "That *was* going to be your *next* question, wasn't it? Why *did* we bring you here?"

"Yes, sir."

"Just plain 'yes,' son, is good enough for me. Now, go to it. Do the research you've always wanted to do. And if you need anything let us know. We're all here doing the same thing you'll be doing." He paused, grinned. "In our various ways, of course. And you can talk to any of us, at any time, about any of the problems you run into. Okay?"

Andy Lang, human being and junior scientist, got up from where Lieutenant Lang, Psycho Officer Third Grade, had sat down.

"Okay, Doc," he said, grinning broadly now.

As Andy Lang left the office of Prof Woods he saw a big hospital transport ship come in for a landing. At a distance he could distinguish the figure of Second Lieutenant Julius Markham, Psychological Officer in Charge,

standing at the ramp waiting for the ship, studying a sheaf of papers in his hand . . .

The sheaf of papers contained the history of the thirty-three new cases, most of them Tank Corps, with a few Rocket and Navy people thrown in.

The litters began to emerge from the ship, carried out by field personnel. There was a white-faced boy with anxious, wide eyes. A bearded man with glazed, staring eyes . . .

Markham smiled at the boy, frowned and looked away from the face of the bearded man. He checked their names from his list . . .

Then a naval officer, cap still at a jaunty angle, with darting, angry eyes. Markham tried to smile, failed, checked another name off . . .

Then they brought Lieutenant Sally Barrows out. She was still screaming. Her eyes were wide with horror in her pale, strained young face . . . Lieutenant Julius Markham had met his first Girl.

He spent the next few hours sitting beside the ward bed of Lieutenant Barrows. Later, his face anxious and drawn, he went looking for his friend, Andy Lang, in Research Division.

He found him in the laboratory which was now Lang's private work shop, his head and shoulders buried in a strange looking box. Markham began talking at once

about the Girl. Andy worked as he listened.

" . . . and nobody seems to know how she got home," Markham finished, a worried frown on his face.

Andy Lang shifted the small work light, poked his head even deeper into the plywood box, reached for the soldering iron with his free hand.

"I said," Markham repeated, raising his voice, "that nobody knows how she got home!"

"I heard you," came from the depths of the box.

"Well, don't you give a loving sigma?" shouted Markham. "She's a *Girl*, I tell you! A damn beautiful screaming lovely mess of a *Girl*!"

Andy, coming up for air, looked at his friend. He put his soldering-iron down. "I've been thinking," he said simply.

"In there?" Markham snorted disgustedly. "Pretty soon you'll start sleeping in that box. What in hell is it anyway?"

Andy grinned. "It's a love machine. But about this girl . . ."

"A *love machine!* That's just what we need!" Markham sneered.

"Now, who's getting off the subject? I said—about this girl, Mark . . ."

Markham sat down abruptly, said quietly, "Okay, Andy. What am I going to do?"

They talked there in the quiet of Andy's lab for over three hours. Mark told him all about the girl,

how he had spent the afternoon questioning her; the utter madness of the things she had told him about the War, about Ships, about the destruction of the Enemy city . . .

She told him all about the vision she kept seeing . . . a vision of Women and Children, a flat black space with a big hole in it—the hole that contained her Ship. Then she'd scream and scream . . . Probably Id-symbols, her vision, or maybe something to do with a man back at her station, a CO substitute, perhaps, and sexual ambivalence toward him. But he wasn't sure . . .

Sometimes she talked about something she called a "disc," and about the Earth and about navels and going home. He couldn't fit that in with the other things she'd said. But all of it seemed to have something to do with the Ship, or with whatever the Ship meant to her.

"She loved her Ship, Andy," he finished at last. "But she doesn't love it now. Something the Ship did has shocked her so that now she has a feeling of revulsion for the Ship."

Andy grinned. "You're sure it was a war she was in and not a bedroom?"

"Cut it out!" Mark snapped. "It was a war all right."

"Oh-ho! Do I hear love in Lieutenant Markham's voice?"

Mark turned on him, fists clenched, blazing eyes. "You and

your love machine!" he said. Then he turned and walked out of the room.

After he had gone Andy Lang sat for a long time, looking at his plywood box, thinking.

VIII

The next day Andy Lang reluctantly took time out from work in his lab and spent the whole day talking with the Old Men. He started with Prof, cornered him after breakfast in the Research Branch mess.

"Tell me about War, Prof," he said. "What is it?"

He listened, asking a few questions, for over two hours while Prof, like a man talking about his mistress, guardedly told him about the battle-axes, potsherds, burial furniture and vaguely shifting dates of his trade. When he was through Andy thought for several moments, then tried to re-state the remarkable facts he had learned.

"Then War is a relatively late invention of mankind? You think it started or was invented in or just before the Sumerian civilization in the Near East around 3000 B.C.? And you find no evidence of warfare among the Neolithic peoples who preceded the Sumerians? Nor even in the Paleolithic hunting cultures that preceded them?"

"That's right," Prof said. "Weapons of hunting were found. But not the distinctive weapons

of War. Of course it's hard to tell, archeologically, just *what* a weapon was used for. But the well-known social consequences of War are conspicuously lacking *before* that time, and so clearly evident throughout the Eurasian land mass later."

"The graves, you mean?"

"That's right. The social distinctions in the grave furniture of the Battle-Axe People, as they are called. The poor with their virtually Neolithic pots and pans on the one hand, the warriors with their baubles, helms and bronze axes on the other. And both from the same sites and strata."

"And the best archeological guess is that it was these people—these Battle-Axe People—who started out somewhere in the northern hills of Asia Minor and spread the art of war they had picked up from the Sumarians?"

"From the Sumarians or from some later Mesopotamian people. It is hard to date those contacts with the hill people. But war-making war was an almost continual activity in the Tigris-Euphrates valley itself right up until the Greek Conquest. The important thing is how it got out of that bloody little valley and spread."

"All over Europe and Asia?"

"That's right. To India along about fifteen hundred B.C., brought there by the well-known Aryan horsemen of the Vedic hymns. To China a bit later, pre-

sumably by the same or related people. To northern Europe, Scandinavia, England and Ireland much, much later.

"But the pattern is the same. They produced everywhere what European historians call the Heroic Age. And their material culture was, from one end of the huge land mass to the other, almost identical—horses, chariots, battle-axes and presumably the Aryan languages. They laid the linguistic bases of Europe and southern Asia. Not China, though nobody knows why not. Presumably the Chinese took the chariots from their conquerors and left the language alone."

"Good. Then you'd make a case for the uniqueness of the invention of war? And its subsequent spread from a single center?"

"I'd say the case was pretty good, yes." Prof nodded.

"And that the other so-called cradles of civilization—Egypt, India and China—were in the beginning essentially peaceful? Until their contacts with the Mesopotamians, or the Aryans who learned from the Mesopotamians?"

"I'd say it was about like that, yes. About early Egypt it is hard to say. About China even harder. But in India the pre-existence of a thoroughly peaceful civilization is established beyond a doubt. From around three thousand B.C. to fifteen hundred B.C., when the

Aryan horsemen came, there flourished in the Indus valley and in the Punjab a far-flung and truly remarkable civilization that for a long time we didn't know much about.

"From Egypt and Mesopotamia we'd learned, or thought we had learned, that what we called civilization and warfare went hand in hand. But in pre-historic India we discovered that, along about the same time, there flourished a civilization more stable, richer in material culture and far more wide-spread than anything that had existed in the Near East.

"And this Indic civilization was *without* war, *without* temples, palaces, priests and kings—and *without* the human slavery that was for so long a time assumed to be essential to a high civilization!"

"And then?"

"And then Indic civilization was smashed, all but obliterated and replaced by a culture far inferior to it in every respect except war-making—that of the Aryans in fifteen hundred."

"All *but* obliterated? What was left?"

"The Indian religions apparently. Some say the roots of *all* religions. But at least the essentially pacifist, life-loving, non-metaphysical religions that characterize the Orient even to this day. Or did," he added wryly, "when last I heard from the other side of our world. Some scholars say

that the pacifist and human brotherhood elements of Christianity, for example, can even be traced to India."

"All that from one obscure, peaceful center?" Andy said. "Despite the apparent dominance of war everywhere?"

"Yes, good ideas die hard, however fragile the civilization that bore them. It almost suggests . . ." he paused.

"Go on, Prof."

"It almost suggests that war is, well, *unnatural* to man, doesn't it, son?" the old man said gently, bright eyes fastened on his listener. "That it sort of doesn't *set* well with him somehow."

"Yes," said Andy thoughtfully. "Yes, it does . . . Tell me, Prof," he said after a pause. "What about the American Indians, the Aztecs, the Polynesians? *They* had war, didn't they?"

Prof laughed. "Well, *now* you're out of my water there. Suppose you go talk to Thor."

So Andy Lang went looking for Captain Thor Norberg and found him in his study, sorting arrowheads. It took him only a half-hour to find his answer there.

"In the first place," said the old Norseman, "primitive warfare is a misnomer. It isn't the same sort of thing as European or early Oriental warfare at all. There was no slave-taking, no territory-swiping, no political domination of the vanquished by the victor after a 'primitive' war.

"Even where there are suggestions of these elements, as in the ritual warmaking and human sacrifices of the Aztecs, there is always a strong presumption of previous contact with the West. And it is always ritualized.

"No," he continued, "primitive warfare is not war in our sense at all. Primitive war was a device for punishment, for righting wrongs, for social control. Among the North American Indians, for example, fighting was an extremely infrequent and short-lived, highly stylized activity. It involved very small numbers of the tribes concerned, was conducted under the strictest inter-tribal rules, and stopped immediately when, by these rules, the wrong that had occasioned the 'war' was considered to have been avenged.

"No, my young friend, primitive war was a far cry from the war the Europeans brought." He laughed. "And as for European war, the North American Indian could make no sense out of it. To him it was inconceivable to think of taking land that belonged to everyone, or making slaves of his fellow men."

"I see," said Lang. And, thanking Thor, he went on to see Anderson, the primate biologist.

"Tell me, Anderson, what kind of an animal is Man?" Lang asked. "What is the best answer biology can give?"

"Well," said the old fellow, surrounded by his monkeys and

his apes, "Man is the only animal who has culture. And he gets so wrapped up in his culture that it's hard to tell just what he *really* is, or might be. Almost anything, I should say. Almost anything his culture tells him to be." He shook his head. "No, I can tell you what a *gorilla* is, or a chimp. But I'm afraid I can't tell you much about Man."

"But evolutionarily speaking," Lang insisted, "before culture—what kind of an animal would you guess he was?"

"Ah-ha! What would I *guess*? Now that's a different story." And the old man put the monkey on his shoulder back on his perch, sat down with a filled pipe.

Andy listened, making notes now and then. He was getting closer to his mark.

"Now," Anderson said, "lots of people claim the most important thing about man is his intelligence. But I'm not much impressed with that. Sarah here—" he nodded over his shoulder at a female chimp—"does a pretty fine job at almost any problem I give her. And she's a gal *without* culture.

"But without culture man himself isn't so much. The plain and rather uncomfortable fact is that, structurally speaking, the brain of man is strictly continuous with that of the higher apes. No, in my opinion it is not likely raw intelligence that sets man above his fellow creatures. It is, rather,

what he learns to *do* with his intelligence.

"But if culture on man's *learned* behaviour is the key to the difference, what biological characteristics was the animal who developed culture—is still developing it—likely to have had? I think there are two answers to *that* question, one obvious, one not so obvious.

"First, the *obvious* one is that man babbles. He starts out babbling as a baby and ends up babbling as an old man. Witness my performance!" He grinned at Andy. "Man likes to babble. The chimp, for example, does not. He much prefers acrobatics to express his joys and fears.

"It may be that one day we shall have to resurrect that old misused but mighty useful word and say that man has an *instinct* for babbling. That, as I say, is the *obvious* one—the obviously necessary biological equipment of any animal that is to develop culture. And it goes a long way toward explaining the nature of man.

"But it has always seemed to me that it does not go *all* the way. Man could and sometimes does babble entirely to himself. Therefore, the second characteristic I would guess pre-cultural man to have had is what might be called *abnormal sensitivity*.

"Sensitivity to the intentions, wishes, feeling-states of other organisms. Some, although by no

means all, monkeys are like that. But I would guess that man was rather a specialist in this department of primitive nature. Biologically speaking man is a rather sweet and innocent—and anxious—little guy. Does the picture shock you, Andy?"

Andy shook his head hesitantly, looked puzzled.

"Have you ever seen a human baby, Andy? No? I thought not. Well, a human baby, my boy, is a pretty remarkable mechanism. In two or three years a human baby manages to soak up what it must have taken his ancestors a half million years to invent. Part of this is sheer brain capacity, of course. But that doesn't even begin to account for the fact that no other animal would or *could* sit still for that long.

"Did you know that man, compared to the higher primates, is born literally prematurely? That the human infant—hairless, helpless, exaggeratedly big-headed—is not *very* different from a gorilla foetus some months before its birth? Man is a freak, a constitutional weakling.

"*Unless* he learned, unless he had this terrible sensitivity, this anxiety, this prolonged and completely helpless infancy that allows—no, *makes* him learn—why, man would be one of the most useless and helpless creatures on the face of the earth. All of his subsequent bravery is bravado, I suspect. His most terrible vio-

lences are undertaken with a quaking heart. How he got by that first half-million years is the big mystery!"

Andy got up. He looked excited. "Then you think man is *not* naturally aggressive?"

"Naturally aggressive?" The old man laughed heartily. "No," he said, wiping tears out of his eyes. "I don't know what frightened warrior invented *that* one, but it just isn't true. Undress and look at yourself in a mirror sometime! Why any one of my baby chimps, a quarter your weight, could easily do you in. No, I'm afraid nature just hasn't given you the body for it."

"But—" Andy began.

"But, nothing," the old man interrupted. "Unless and until someone gives you a spear or a club or a battle-axe *and* teaches you how to use it, you just don't stand a chance. Next to my ring-tails here Man is probably the gentlest creature that ever lived."

"Biologically speaking." Andy grinned.

"Biologically speaking." The old man nodded. Suddenly they both noticed the roar of a flight of jets outside. Andy stood up.

"Well," he said, backing toward the door, "thanks, Doc. Thanks a lot. Got to get back to work!"

"Hey!" the old man called. "What are you working on, boy?"

"A love machine, Doc—a love machine." Then he turned and ran.

IX

Sally Barrows looked up at the ceiling. Her mind was faint and still, like a vast hall strewn with the bodies of a thousand people, in which the echoes of voices and departing footsteps have just died down. She sighed, turned her head and saw someone was sitting in the shadows beside her bed.

"Who are you?" she whispered.

The shadow rose. From it emerged the face and figure of a man.

"My name is Julius Markham, Sally," he said softly.

It was a gentle voice, and young. But she turned away.

"We've been taking care of you, Sally," the voice continued. "You've been hurt. But you're all right now."

"Where am I?" she said, after awhile, her face still turned to the wall.

"At the—" Julius faltered—"the Third Army Re-Processing Center, Sally. They brought you here after you returned from the War."

She tried to think about that but she couldn't. Finally she said, "You're a Psycho, aren't you?"

"Yes."

"Get out," she said quietly. She listened for his footsteps. There were none. She turned her face back to the side on which his shadow stood, rose on one elbow and screamed at the top of her voice, "Get out! Get out! Get out!"

Three times, perfectly even and regular. And Markham smiled at her, as a good psycho should—and left with his breaking heart.

He went later to Colonel Schroeder to make a report on Sally Barrows.

"She's been here a week now, Colonel, sir," Lieutenant Markham said. "And today, for the first time, I got through to her. You know how they just open up sometimes?"

"Yes," the colonel said. "Go on."

"Well, sir, she was screaming and babbling away as usual. I was taking it down on a recorder, putting in a suggestive word now and then. You know—the Mark-four treatment?"

"Right."

"Then all of a sudden she stopped, stared at the ceiling for a moment, blinked her eyes a few times and turned to me and said, 'Who are you?' just as nice and quiet and normal as you please!"

"I see."

"And, Colonel, she even smiled!"

"And . . ."

"Then she went back, sir. Began to babble again."

Colonel Katrin Schroeder waited. When he didn't continue she said gently, "Then what did you do, Lieutenant?"

"Why—I left. Like she asked me to. I went down to talk to my Ward Leader, Captain Jackson, and asked him about it. He

didn't seem to know what to do. I've tried everything, sir—everything there is to try."

She frowned. "Of course," she said.

"All the drugs. All the physiotherapy. All the—everything, sir. But she slips away from me. She slips right away from me."

"Odd!"

The colonel wasn't looking at him any more. She seemed to be reading some papers on her desk.

He began to speak in a brisk Psycho Officer's tone. "Well then, sir, knowing that the Center must get this sort of case all the time, I—I thought it best to talk to Captain Jackson, sir . . ." He was repeating himself. That wouldn't do. He watched her bowed head intently. "And *he* suggested that I talk to you . . ."

Colonel Schroeder looked up. "You did quite right, Lieutenant. And Captain Jackson did well to send you."

"You aren't too busy, sir?" he put in eagerly.

"No, I'm not too busy." She stood up, smiled at him warmly. "Lieutenant, I think we'll transfer you to another squadron."

"Yes, sir," he said miserably.

"The girl will be all right. I'll have Jackson put the best man he has on her case. Understand?"

"Yes, sir. Thank you, sir."

She bent over her desk, scribbled a memo. "Ward-G, Lieutenant Markham, isn't it? You may move tonight."

Markham saluted her bowed head, stiffly and turned to go.

"And, Lieutenant!" she called.

Markham stiffened. With his mind's ear he heard her voice. *You'll get used to it, Lieutenant. When you're as old as I am, Lieutenant.* Reluctantly, he about-faced, stared boldly at her.

"Don't look in on the girl. Don't see her again. Those are orders. Do you understand?"

"Yes, Colonel," Markham said. "I understand."

"Mark!" said Andy joyously, seeing his friend in the open doorway of the lab. "Where in sigma have you been?"

"Working," Mark said quietly, and walked in. There was another man with Andy. Good old Andy. Seeing him made him feel almost normal again.

"Mac, this is Markham," Andy was saying. "Friend of mine from cadets. Mark, this is Mac—I mean, Major MacGregor. The major's been helping me, Mark."

A major? Helping a 2nd Lieutenant? What was this anyway?

"Glad to meet you, Major," he said. Why, the Major was wearing no insignia, not even a uniform shirt! Wrapped up in a grimy white apron he looked like one of the old native workmen they kept around.

Mac grunted, wiped a hand on his apron, extended it to him without turning completely around. Then he went back to work.

Whatever it was, they were awfully busy at it. He guessed he'd better not wait. He beckoned to Lang, who was reaching for his soldering-iron again. Andy followed him to the door.

"Who is he?" Mark whispered.

"Major MacGregor, like I said. Why?"

"Really a major?"

Andy grinned. "Sorry. Guess I haven't told you about my Old Men?"

"Old Men?"

"My scientists. They're all heavy with rank. But they all come from way back so they don't know how to use it! Very nice guys, though—very nice."

They stood whispering like conspirators. Then Andy laughed, slapped his friend on the back. "Come on over and see it! You *did* come over to see it, didn't you?"

"See it? What it?"

"Why, my Love Machine, of course. Come on!"

By this time the Love Machine had outgrown its original plywood box. It had long smooth aluminum sides now and inside, when you raised the lid, it bristled with more electron tubes than Markham had ever seen in one place. On one end—the Programming Section, Andy called it—was a roller of punched tape and a battery of pick-up relays.

At the other was what looked like a small directional antenna, but completely covered by a hood

of metal shielding and aimed at the far end of the room. Inside the shielding—which was continuous on all sides, Mark noted—and standing directly in front of the antenna—was an ordinary lab table. On the table stood a large, many-tiered cage of white Norway rats, stock-in-trade of the experimental psychologist.

"Okay," said Markham, going over to the screen and looking in. "What are you doing to the rats?"

"You really want to know?" Andy was grinning, a wicked, kidding grin.

Mark sat down on a lab stool and grinned back. "Okay," he said. "What's the scoop?"

"You know, Mark," Andy began, "how I always liked to play around with rats? Motivation—learning curves—all that stuff. Not that I ever kidded myself that I was finding out much about human beings. But they're mammals anyway." He grinned. "And anyway it's fun."

"Here at the Center, with the Old Men"—he glanced sheepishly at Mac, who had obviously heard but gave no sign—"anything goes. I had some ideas about how I could even out motivation by picking up and amplifying electronically certain of the characteristic electroencephalographic patterns of the species and broadcasting it back at them by ordinary radio. That's the transmitter in there." He indicated one end of the long box.

"Well, like most first tries, it didn't work. But I got some effect and that was encouraging." He began to grin again. "You see, they didn't want to eat, wouldn't fight, didn't even play. All they wanted to do was—well, have babies."

Markham laughed. "So *that's* what your 'love machine' does?"

"That's how it got its name," his friend continued, grinning. "It didn't last long, though. After a day or so they got hungry again and their baby-making went down to normal levels. I began to think that I'd produced a completely evanescent effect.

"Then I began to notice some curious residual effects, not only in the behavior of the experimentals but also—and you won't believe this—in the new generations as well! As you can imagine I had plenty of new generations! Anyway these new ones hadn't been exposed, not even foetally, yet they exhibited the same residuals. I thought that curious." Andy frowned. "Still do, as a matter of fact."

"Well," said Markham impatiently, "what *was* the new behavior? After what you call the *love-effect* wore off?"

Andy scratched his head. "It's a little hard to describe, Mark. I'd collected pre-experimental control data, of course, but it wasn't enough to pin it down exactly. Right now we know more about what we're looking for but we

still don't know exactly what to call it."

"Well?"

"Well, I'd suggest that they were—*happier* somehow," he blurted.

"Happier? Rats happier?"

"Yeah. They seem to fight less, play more, are *affectionate* much of the time. More sociable and responsive in general. And, oh yes, more intelligent. Sort of an all-around improved rat."

"Stop! Stop it!" Markham cried, laughing uproariously.

Andy went on stubbornly, "with the meanness toned down. What's so funny! Don't you like rats?"

Markham gasped, "It's that *all-around rats* that got me."

"Doc Anderson suggests," Andy continued stubbornly, "that my rats, like all captive animals, had been living in what he called a disordered society . . . He's the biologist here . . . He says they weren't quite normal, so to speak, and that the love machine simply stimulated them to—well, more biologically *normal* behavior."

"Sort of reminded them of what they are, so to speak?" Mark said with a great effort to stay serious.

"Well, something like that," Andy agreed, eyeing his friend suspiciously. Cautiously he went on. "But Mac, here, has a different notion. He agrees it's probably the captivity that sets them up for it but thinks it's simply a tension-releasing effect.

"He thinks the heightening of

the radio-electric field typical of the animal helps break up the tensions that are locked up inside them. Of course, none of this *explains* anything yet," he added worriedly. "No, I'm afraid we don't know what we've got here. But we still call it the 'Love Machine.'" He grinned.

Markham's amusement was completely gone. He looked intently at the machine. "And the *first* effect is *always* heightened sexuality?" he asked.

Andy nodded. "So far. Mac thinks that's because, in captive animals especially, there's always unresolved sexual tension. But the sudden increase of what Anderson calls 'sensitivity' or 'other-awareness' simply finds them more aware of each other's needs in a sexual direction than before. So they release the sex tension, so to speak, then get on to other things. It fits the data," he added soberly, "but it still doesn't explain the second generation."

"I see," Mark said and thought a moment. "What are you going to do with it—the Machine, I mean?" he asked abruptly.

"Why, I don't know. Experiment with it—find out what we've got. Why?"

"Nothing."

Andy glanced at Mac, obviously eager to get back to work. "Right now we're setting up for a run on chimpanzees." He was edging back toward the work bench.

Mark followed, said, "Chimpanzees?"

"Yup." Andy's hand closed on his beloved soldering-iron. He turned and began to work at Mac's side. "Doc's chimps. He's letting us borrow them."

Mark said over his friend's shoulder, "What kind of electroencephalographic pattern do chimpanzees have?"

"Oh, pretty much like the human," Andy mumbled.

"Any important differences?" Mark asked.

Mac answered this time. "Only the voltage level," the older man said. "The general picture is identical."

Markham got out his notebook. "How much difference? And which way?"

Mac turned around. "Look here, m'lad. We're busy."

Andy said, without turning around, "Thirty-five hundred millivolts *more* for the human."

Mark breathed deeply. "Sorry, sir," he said to the tieless major. And when the old man had turned back to his work he wrote the figure down.

He stood for a moment, finally tapped his friend on the shoulder. "Think I'll be going, Lang," he whispered. "You going to finish that tonight?"

Andy straightened, wiped his hands. "Yeah, going to run the chimps in the morning. Say! I forgot to ask you, Mark. How's that pretty patient of yours?"

Mark pumped Andy's hand. "Fine, Lang—just fine," he said, then left the lab.

"Funny," Andy said, looking after him.

"Mmmmmmm?" said Mac.

And then, for a long time, there was only the comradely hissing of the two soldering-irons.

X

In the middle of the night Pilot Sally Barrows awakened to feel the Ship rocking strangely but with the familiar stars still overhead. Aldebaran, she noted, lay on the far horizon. Good. Still rising. It would be a long time before she'd be on top. Nothing to worry about yet. And with that she snuggled down into the warm bowels of the Ship again . . .

After that she had a strange dream—something to do with the couch in the Ready Room back at the Station, with the tall E-Flight lieutenant kissing her. Only this time there was no lorry outside to take her away. Nothing but the mouth and the hands and the deep couch . . . forever.

It was a funny dream, almost like being awake. And no more feeling of fear, of aloneness . . .

Early the next morning Lieutenant Markham set his tray down across from the dour Captain Jackson. "How's Ward Thirteen this morning, Captain? Stumbling along, I hope, without the ministrations of Lieutenant Markham?" He grinned.

"Morning, Markham," the captain grunted not looking up from his bacon and eggs. Three slices of toast and a cup of coffee later he lit a cigarette and leaned back, gazing at Markham.

"That patient of yours, Markham," he said; "seems to be all right this morning."

"Oh? How nice! Always thought she'd come around. My Freud, we've sure got some odd ones on Ward G though. Incurables for sure!" He went back to his pancakes with gusto.

The captain was satisfied. He leaned forward, put both elbows on the table and looked at Markham. "Frankly, Markham, what *did* you make of her?" he said.

"Who? Oh, the girl! Case of pure analoid-hysterics, I'd say. Sometimes they do snap out of it pretty rapidly, you know. Why, back at school . . . You say, she's all right this morning?"

"Completely all right. In fact so completely I don't know what to make of it. Talking with all the staff people like she'd known them for years. Even visited some of the patients after breakfast. Made some of them laugh and smile even. It was sort of weird and . . ." He paused.

"Weird? How so?" Mark prompted.

"Well, there she was. Yesterday a screaming idiot. And today—today she seems to be more sane than any of us. Frankly it's got me worried." He laughed.

"We aren't supposed to re-build them *that* good!"

Markham got up to go. "I wouldn't worry about it, Captain. I've heard that analoids are often like that. Especially females of her age."

"Say, Markham," the captain said. "You wouldn't like to come around and see her, would you?" He grinned slyly. "You're all right after all, kid. I can see the Colonel about getting that order rescinded."

"Oh, no! Don't do that," said Markham hastily. The captain he could handle; the colonel, no. "I'll visit your ward. I'll come around right now—be glad to. But I wouldn't tell the Colonel, if I were you."

"Well, it's your neck, kid," said the captain as if that disposed of the problem. "You go along and visit her. I've got to stop off to pick up a report."

Markham nodded, continued alone into the ward.

Sally was standing at the window of her room, in a bath-robe when he entered. He shut the door quietly behind him.

"Sally," he whispered.

She turned quickly. "You're Julius, aren't you?" she said, and smiled.

For a moment Markham just stood and looked at her. At her yellow hair, flaming in the sunlight of the open window. At the lovely eyes, the mouth half-open and ready either to laugh or cry.

At her figure, slim and taut under the coarse robe. She had turned into the most beautiful creature he had ever seen or dreamed of, and his eyes drank her in hungrily.

"Yes, I'm Julius," he said at last.

She walked toward him, her eyes searching his. He stood rigid, like a soldier on parade, afraid that she would touch him, anguished that she might turn and run.

She stopped inches from his rigid figure, looked up at him and said in a voice that was sure and glad and gentle, "You love me, don't you?"

"Yes, Sally, I do," he whispered.

"I'm glad. I love you too," she said. And she tilted her face for his kiss . . .

In the days that followed Sally Barrows continued to amaze Ward 13. The staff adored her, permitted her anything, secretly dreaded the swiftly approaching day when she'd be discharged. Even dour Captain Jackson followed her about like a puppy, basking in her presence and taking notes on her every word and action.

Her technique with the patients was amazing. They were largely catatonic schizophrenics, all men. Shocked by battle experience into the indrawn immobility or the delicately senseless posturing of the schiz, some of them had not spoken to or even looked squarely

at another human being in years.

But they looked at Sally Barrows. Watched her walk by, tried to return her smiles. When she sat with them they tried to talk to her, each in his private language of gesture or garbled word. And henceforth each lived only for her visits.

It was amazing how she learned their languages. The schizophrenic, Jackson knew, suffers essentially from a disorder of language—a disorder which isolates him, often perpetually, from his fellow men. But Sally learned their languages, mastered their syntaxes, their twisted symbolic vocabularies and gradually, ever so gradually she brought them back into the human linguistic mode.

As far as anyone could tell her sole technique for accomplishing this almost impossible feat was by looking at them. Looking and listening, touching and being touched by them. It was astonishing to watch her. A casual visitor to the ward would have taken her for a schiz herself as she sat making meaningless gestures they made, giving back the same vacuous stares and sudden lapses into immobility. But it was by such means that she carried on her conversations with the damned.

And they began to recover. One by one, little by little they began to get well.

But she did not spend all of her

time with the patients. Much of it she spent with Julius Markham, the only one of the hospital staff who seemed not to be astonished by her strange new skills. With Julius she loved to talk, to puzzle out the secrets of her skills, to feel the quiet intensity of his love. And he seemed to want to spend every available moment of his time with her.

"Julius," she said one day. "I shall be going back soon, I suppose." It was half a question.

"Back to the War and the Ships. Yes, I suppose so, Sally."

"I don't want to, you know," she said with a little frown. "I don't know exactly why but I just don't want to go."

"I know," Markham said.

"It's not just that I'll miss you, Julius," she said softly. "Though that's strong enough. It's something else—something here." And she put her hand upon her breast. "Something about the killing and the Ships. You see . . ." she had never told *this* to him before . . . "I know now about the Ships. The beautiful terrible Ships. How they kill—horribly." There was neither fright nor despair in her voice. Just sadness.

Julius got up. He had suspected. Now he knew. He said, "I've got to go." He made it as casual as he could.

She looked up at him. "You're going to *do* something, aren't you?"

He grinned. There was no

keeping secrets from her! "Yes," he said, "I am."

Her eyes searched his. "Something for me?"

"No, Sally," he said. "Something for everyone."

"Be careful, Julius," she said. And she took his face between her hands and kissed him.

XI

"And that's how it is, Lang," Markham finished. "I'm afraid that's how it is."

Lang stopped his pacing. The orangs chattered at him from their big cages. He frowned at them and they stopped. He faced his friend.

"You took an awful chance, Mark," he said.

"I know. I was desperate. Those mind-butchers would have marked her incurable in Freud only knows how many more days."

"And you've made me feel like a fool, puttering around with orangs when all the time . . ."

They both laughed.

"Come to think of it," Andy said, scratching his head, "you've brought us some damned good news. Me and the Old Men."

"The best," Markham said. "Maybe the best there ever was. I tell you, Lang, I'm proud of you. You and your Love Machine!" He took his friend's arm. "Let's go find your Old Men and tell them."

The Old Men were jubilant but insistent. "Get her out of there!"

Prof said. "Bring her over here this afternoon. God knows what they'll do to her when they find out!"

"But the Colonel, sir?" Markham said.

"*Damn* the Colonel!" Major Woods said in his rising seventy-two-year-old voice. "Bring her *here*. Then we'll see what the Colonel has to say."

"Probably she's a saint," the historian Rogers was saying when they went out. "The first blooming saint in over two hundred years!"

Mark and Lang went directly to the ward and told Sally Barrows their plan.

It was a rash move but the switch was accomplished easily enough in a borrowed ambulance with Sally hidden inside. Mark drove and she laughed and was scared by turns as Andy sat with her and told her the story of the Love Machine.

"Then I'm—I'm a product of the Machine?"

"No, Lieutenant Barrows," Lang said quickly. "We've pretty well proved by this time that the Machine does nothing but enhance the *normal* biological potentials of the organism concerned. Whatever you are we *all* should be."

"But your rats, Lieutenant. You told me that they . . ." She blushed furiously, feeling his eyes on her.

"Rats in a cage, Miss Barrows,"

he told her softly. "Just like you were. Like the rest of us *still* are."

The Old Men were waiting for her, waiting with their instruments and test-tubes and measured questions. But when she actually arrived there was a moment when it looked as if Science was going to be forsaken for the prouder gallantries and endless posturing of seventy-year-old men in love.

Sally was dressed in her rocket blues. Bold, dashing, incredibly lovely to look at and with a softness and warmth in her eyes that was never meant to go with that uniform. She stood there, smiling in front of them, and they were stunned by the sight of her.

Prof was stunned. Doc was stunned. Mac simply harraumphed and hawed. Norberg was the first to recover. He stepped forward, his granite face creased by a rare smile.

"Ah—welcome to the Research Branch, Miss Barrows. Ah—I'm afraid you may find us—well, a bit old and left over from another world. But we'll do our best to answer your questions, and make you comfortable here."

At the word *comfortable* they were all reminded suddenly of the gallantries of that other almost forgotten world.

"A seat, Miss Barrows?" one said.

"Perhaps a glass of water?" asked another.

"Smoke?" said the most

stricken of them all, offering her his ancient meerschaum pipe.

Finally, with Andy's help and Markham's tense insistence, they got down to work. They took every count and level of her physiology. They gave her every known intelligence test and some they had worked up for the occasion. They gave her the Rorshak and the ancient *TAT* and stood amazed at the odd, imaginative quality of her responses.

They tested her physically and biologically. And at Markham's suggestion they explored her remarkably capacity to guess, as they weakly called it, the thoughts, intentions and feeling states of others. Any others in any kind of situation.

And they talked with her—talked with her about old-fashioned questions of logic and philosophy, ethics and the destiny of man, politics and aesthetics, religion and science, each in his turn brandishing his specialty gently and courteously before her eyes. And they found her ignorant as a child is ignorant but wise and quick and receptive beyond belief.

Then they had a conference, all of them bustling excitedly together, and Mark and Sally and Andy waited in the Orderly Room outside.

"Tired?" Mark said after a while. It was almost supper time. They had been at it four hours.

"A little," Sally admitted. She gave him a weak smile.

"Don't be nervous," said Andy. "They may be old but they're the kindest most decent people I've ever known. And the most learned. They'll come up with something, I know."

And twenty minutes later Prof stepped out of the room and smiled at them.

"Well," he said, "we've kicked it around as far as we dare. Won't you come and join us now?" He held the door open for them. "You see," he added as they filed past. "We think the Love Machine may have—" He broke off, his eyes catching sight of a uniform entering the Orderly Room. And with all the power in his ageing lungs, he shouted, "ATTEN-SHUN!"

"Relax, gentlemen." Colonel Katrin Schroeder laughed as she walked leisurely around the conference table. Behind every chair she stopped, picked up the little pile of penciled reports in front of them, leafed through, reading rapidly.

The Old Men lit their pipes.

The four armed MP's and Captain Jackson stayed at attention.

Sally, Lang and Markham stood to one side, watching her.

Major Wood put on his best Commanding Officer's frown and followed her at a discreet distance as she strode around the room.

Finally she stood at the head of the long conference table and smiled down at them, a small,

neat figure in her military whites. "Congratulations, gentlemen. I believe you've done it." The room stirred, responded with a few coughs. "Yes, sir, Major, I believe you've finally done it."

"How's that, sir?" Prof said.

"Not only have you developed a machine that would have cured —beyond all repair evidently—any patient I might have been fool enough to use it on. But . . ." her voice rose shrilly, angrily, ". . . *but* in your grotesque failure, gentlemen, you have evidently stumbled on the Secret Weapon that will smash the Enemy once and for all!" Her smile returned and she looked around the room, beaming at them. "As I say, gentlemen—congratulations!"

"Thank you, sir," said the Major dryly.

"Now, Major," she said. "May I see it?"

"See what, sir?"

"Your Love Machine, you old fool!" she shouted. And slashed him across the face with her gloved hand.

There was a stunned silence. Then Mac rose ponderously to his feet and said in a Scottish accent long submerged, "I wouldn'a do tha', lass, if I wurrr you."

The MP Sergeant was behind him in a step.

"I wouldn't do *that*, sir," he prompted softly, "if I were *you*!"

"Carry on, gentlemen," said the Colonel, harshly. She prodded the Major in front of her and out

of the room. "Come along, my dear," she said gently to Sally on her way out. The MP's and Captain Jackson fell into step behind her.

A deep silence fell over the room after they were gone. The Old Men sat there, smoking their pipes, thinking. Occasionally a voice would speak, then silence again . . .

"Prof'll be back soon," Doc Adams would say. But nobody would reply. At other times he would hover over the two youngsters, Andy Lang and Markham, as they padded restlessly up and down behind the row of chairs, try to calm their fears.

"Can't we *do* something, sir?" Mark would say, stopping and glaring at the old astronomer.

"Sure we can," Doc would say. "Whatever they do with the Machine, they'll need you boys to run it. But not now. Right now we just take it easy."

"Sure, take it easy," Andy would mutter, "like rats in a cage." It had become his favorite simile. "And just about to get out too."

Always Doc would smile at that. As the Lost Astronomer he was the only one who hadn't had his intellectual wheels down for a landing when the blow-up came. Whatever happened to the animals on it *his* crusty old planet would roll on and on.

It was night when Prof came shuffling back. They made him

sit down and load his pipe before they let him talk.

"They've put an armed guard on the Machine," he said, puffing on his pipe. "So don't go near it. And they worked me over a little." He puffed some more. "Guess I told them all I knew." The rest of them smiled at that.

"Actually," he went on reflectively, "The Colonel isn't very angry. She's more excited. Thinks she's going to win the war with the Machine. First thing she did was get the Joint Heads on the wire." He smiled. "Calls it the Mental Atomic Bomb. Which it may very well be, at that." He puffed some more. "She's convinced that our Sally is a thoroughly ruined woman. Even gave me a little moral lecture about that."

"Prof," Andy said quietly, "what happened to Sally?"

Markham sat tense, waiting for his answer.

Prof turned to the two boys, "They took her to Ward-K, I believe."

"Ward-K!" Mark shouted. "But that's for—"

"Uncurables," Prof said. "I know. But . . ."

"But what?" demanded Mark angrily.

"But," the old man smiled faintly, "I wouldn't worry about her if I were you. She was smiling at me when she left and—"

"Well, you're *not* me!" Mark broke in. "I guess I got her into

this mess. And if they do anything to her, why I'll . . ."

Prof put up his hand weakly. "Wait," he said. Mark stopped. Then to the others he said, "I guess you didn't tell them, eh?"

They shook their heads.

"Tell us what?" said Andy.

"That it would be kind of silly for the likes of *us* to worry about *her*. You see—how can I put it? —you see, she's sort of a Sir Isaac Newton and Jesus Christ and Buck Rogers all rolled into one. She blew the top off of every intelligence test we had." He sucked on his pipe thoughtfully. It was a hard thing to say all at once.

"Her sensitivity to others *almost* amounts to mental telepathy. We've guessed, mind you, only *guessed* that her physical courage is—well, limitless. And she seems to be utterly incapable of doing what we *used* to call wrong." He paused. "You see, boys," he finished quietly, "she is *apparently* a human being. Maybe the first one this old planet has seen for a long, long time."

"She's out of the cage, then," Andy said.

"Completely out," said the Major.

XII

It didn't take long for the Generals to get organized. They came to Arizona in unmarked jet transports, in sweet little personal fighters and by submarine

and subterranean train from all over the Hemisphere. There were Generals of all nationalities and Generals from every branch.

Colonel Katrin Schroeder moved out of the WBOQ, turned it into a General Officers' Quarters and had a cot brought into her own office for herself. The Center, watching these preparations, was agog. Even the patients felt it. But no one outside the Research Branch, not even the Colonel's adjutant, knew exactly what was brewing.

As for the Old Men, apparently nothing had happened—not even the Colonel's slap—to disturb the tenor of their days. They read, smoked their pipes, played a little chess and puttered in their labs as usual. And they scarcely noticed it when a visiting General poked his head in to pass the time of day.

Ultimately the Generals assembled in the strict secrecy of the desert flats behind the Center and Colonel Schroeder commenced her demonstration of the remarkable efficacy of her Mental Atomic Bomb.

Captain Lang, whose double promotion had been instigated by a General both grateful for his services and appalled at the prospect of being lectured by a second-lieutenant, was unavoidably in charge. Second Lieutenant Markham, for whom had been claimed a technical proficiency he did not have, was the Captain's aide.

The scene was a sort of gladiatorial arena, dug in the sand, with bleachers for the Generals all around. Covering this pit and skirting it on all sides was a sturdy net of metal shielding, installed under the Colonel's personal supervision. Inside the net, as in Andy's lab, was the antenna, connected by shielded cable to a large transmitter and—The Machine. This last, brought up and installed in the control-booth under armed guard, was to be operated by Captain Lang and his aide.

The first act was brief and to the point—the "ice-breaker" as the Colonel fearlessly called it. Some fifty of Doc Anderson's rhesus monkeys trained against their nature, to fight, were brought up in trucks and let loose in the arena. Then, with a three-second broadcast from the appropriate tape, Captain Lang, at the Colonel's unblushing signal turned the mêlée into a wriggling squealing hooting scene of, well—love.

The Generals smiled a bit at this one.

The second act was longer and, from the military standpoint, more impressive. Sixteen criminals had been brought at the Colonel's orders from the Continental Penitentiary—the roughest, hardest, toughest men that the warden could supply. Evenly matched physically, they were led between two columns of armed guards into the arena.

The Colonel did the honors.

First she read off the long list of crimes that had been committed by her subjects—everything from murder through armed revolt to rape of commanding officers was included in that list. She assured them coolly that if there was any aggression instinct in humanity it was here, in these creatures.

Then she turned her loud-speaker on the prisoners standing angry and humiliated below. Her orders were crisp and brief—the first man to kill any other man would be unconditionally freed and exempt from military duty for the rest of his life.

All the others—except the dead man—would be returned to the pen, to serve out the rest of their terms. Ground rules? There were none. Anything went. They could gang up if they chose but in that case, the Colonel warned, only the one who actually struck the killing blow would be freed.

She blew a little whistle and the fight began.

It was slow in getting started. With instinctive fairness the gladiators paired off. Then, suspicious and still doubtful, these couples circled endlessly, trying to read in each other's eyes the first glimmer of serious intention.

"A thousand bucks to the winner!" an impatient General, a true sportsman, shouted from the stands.

The fight began in earnest. The prisoners threw themselves in

silent struggling couples on the ground.

"How long does it take for a man to choke another man to death?" said Markham from behind his binoculars.

"I don't know," said Andy, hand tightening on the switch of the Love Machine.

"Oh-oh! He's found a rock! Better stop it, Lang."

Captain Lang threw the switch and prayed to whatever gods there were. Then, heart thumping in his chest, he tried to pick up his own binoculars and couldn't. There was a heavy silence. Then Mark said gleefully, "It's all right, Andy! Take a look! They're getting up! Even helping each other up! Sigma! Now they're brushing each other off!"

It was then that the roar of laughter came up from the stands and they knew they had won.

But the prisoners were grouping now, looking somberly up at the stands. They went over to the shielding net, began to test their strength against it in a body. The Brass suddenly stopped laughing.

"By sigma!" said Andy suddenly. "I'd better get down there."

Before Mark could stop him he had vaulted out of the control-booth and was racing for the guarded aperture in the metal screen. The guards let him through.

Breathlessly Mark and the Generals watched Andy Lang. He

went up to the little group of prisoners, began talking to them. Mark caught his breath as they formed a little circle around him. Then, after about thirty seconds, the little huddle broke up and Captain Lang, followed meekly by the sixteen former criminals, walked calmly out of the arena.

Mark watched his friend stand by as the sixteen prisoners filed quietly into the armored prison trucks while the Generals roared.

Later Andy told Mark what had taken place down in the arena.

"What were they going to do?" Mark asked him.

"Kill some Generals," Andy said shortly.

"But I thought . . ."

Lang looked at his friend oddly. "The *Colonel* thought," he said, and let it go at that.

He was surprised himself at how quickly his mind seemed to comprehend the difference between killing a comrade for gain and *being* killed as they would surely *all* have been killed in the effort to punish someone who had humiliated them.

Mark was shaking him. "What did you tell *them*, Andy? What in sigma did you say to *them*?"

"The truth," Lang said. "The Love Machine isn't hard to explain."

Mark said, "But there's so much to explain! And you had so little time!"

Andy said, looking curiously at

his friend, "It wasn't hard. Not when you've got *human beings* to talk to."

"They really were, eh?"

Lang smiled, began to set up the next display. There was confidence in his fingers now.

Mark looked at his friend's back. "You know, Andy," he said quietly. "You forgot to turn the lovin' think off when you went in."

Andy looked around, startled. Then he smiled. "So *that's* why it wasn't so hard!"

The demonstration was a success. The Generals were convinced. They had a meeting that night and talked to the Old Men and interviewed Sally. But from that first moment, from their first laugh, they had been convinced. And to see that bright young Captain Lang lead the sixteen thugs out like a pack of whipped curs was a real thrill . . .

It was the end of the War, no doubt about it! And any fear they might have had for the immense upheaval in the hemispheric economy that the Peace might bring was quickly dispelled by the thought of the equally huge Hemisphere on the Other Side just waiting to be occupied—and perpetually policed.

"Why, they probably won't even be able to tie their own shoelaces when we're done with them!" one General said.

With despatch and with the utmost secrecy they laid their plans.

Captain Lang—who had promptly been promoted to Major on the basis of his afternoon's performance—a certain Lieutenant Colonel of the Communications Corps and Colonel Katrin Schroeder, who was quite the most handsome woman any of them had seen in years, were the only personnel below flag rank who were to know anything at all about Operation Love, as it was promptly labeled.

"This thought-wave or whatever you call it *is* transmissible over long distances, Major?" a General asked.

"Any ordinary carrier—that is, radio-wave—will carry it, General," said Andy.

"Over any distance, Colonel?"

"We'll have to make tests on distance, sir, but I see no reason to doubt it. According to the Major's figures, the brain serves as its own amplifier."

"Good. Then you are certain the wave can be sent to the Other Side?"

"Virtually certain. The only real problem is shielding."

"Shielding?"

"Yes, sir. Metallic shelters for civilian and military personnel. We don't want it to come back and do *us* in, General," the communications man said.

The Generals laughed nervously.

"I have an idea about that, sir," said Andy when the laughs subsided into coughs.

"Yes, Major Lang, go ahead. I should say we're pretty interested in your ideas by this time. Right, gentlemen?"

Andy blushed and went on. "If we use very low frequencies and directional antennas, we won't need shielding. And, anyway, to shield areas large enough to contain the entire hemispheric population during the broadcast period, would be, I suggest, a little unwieldy."

"That's right," someone said. "It would take months to get ready, as I understand it, and certainly, with so much activity going on, it would give the plan away. Speed and secrecy are of the essence, gentlemen."

"Quite," said the presiding General, who rather liked the English manner. "What *is* your plan, Major?"

Quickly, Andy outlined his plan. One master station to send out the main signal on direct beam transmission—or even wire if that was safer—a net of smaller stations circling the hemisphere to pick it up and rebroadcast it on interlocking cones that would cover the Other Side. And if the waves of the "weapon signal," as he began suddenly to call it, were sufficiently long, why, they'd pass through the Kennely-Heaviside layer after having done their work and carry out harmlessly into space.

He turned to the Communications Colonel. "Right, sir?"

The Colonel was a bit puzzled by one or two details, but he said, "Right!" with military despatch and the conference sailed serenely on.

The only problem seemed to be that of having enough stations in the secondary net really to cover the populated areas of the Other Side. This was rather happily solved by the Colonel's pleased statement that the Communications Corps had recently completed just such a net of line-of-sight transmitters that virtually covered the Enemy Hemisphere. Their purpose had been to extend the coverage of the Corps' "Vision of Heaven" program, televised weekly to the Other Side in line with a recently developed strategy called "product propaganda."

The Colonel assured the Generals that this entire net could be converted to very-low-frequency radio transmission virtually overnight.

Major Lang was seen nodding happily at this and again the conference sailed on.

The only thing left to arrange, in fact, appeared to be the setting-up and keying-in of direct-beam relay stations between the master station and the secondary net. And, of course, to select the master station itself.

"The most powerful one in the hemisphere," Major Lang said hopefully.

"Right, my boy," said the presiding general genially. "You

shall have the most powerful one in the *world!*"

Again, the Communications Colonel said, "Right!" but this time a little dubiously. It seemed to him that perhaps location was a slightly more important factor. But, oh, well . . .

And *again* the conference sailed on.

They considered next the not unimportant problem of what to do with the billion-odd defeated and perhaps somewhat disconcerted enemy after Operation Love had done its work. They set Colonel Schroeder the grisly task of setting up hospital service for the worst damaged of the enemy—"since she's had experience with the thing"—and, finding nothing left to do, set L-Day for a week hence. Then they prepared to adjourn.

"There's just one more little thing, General," Major Lang said, catching the Chief's eye.

"What's that, my boy?"

"A personal favor, sir."

"Speak up, my boy."

"It's about the patient, Lieutenant Barrows, sir. I feel personally responsible, sir, for the unfortunate damage our experiments have done her. One of our own people too, sir. And, well, sir, since she's still quite competent physically, sir. And since it appears I'll be doing a bit of traveling . . ." Major Lang had also acquired a sudden fancy for the British manner, it seemed.

"Why, I wonder if I might have her for my personal pilot, sir."

"Why, of course, my boy, I quite understand. I'd hate to have that sort of thing on my conscience myself."

"But General," said Colonel Schroeder stiffly. "Lieutenant Barrows is *already* receiving the best of care!"

"Tut, tut, Colonel," said the General, beaming at what he took to be her motherly concern. "I'm sure the Major here will give the poor creature even better care. Right, my boy?" he added with a sidelong wink. "See that it's done, Colonel," he remarked as a precautionary afterthought.

"Yes, sir," said the Colonel, recognizing complete defeat.

As quickly as was courteously possible Major Lang left the room. He had a romance to patch up and he had to do it fast.

XIII

It was a busy week for Major Andy Lang. Tests had to be run on the long-distance carrying power of the L-Effect—tests which came out handsomely. Trips had to be made to the big transmitter in Iowa—which he found to be admirably suited to his purposes. The L-Machine had to be checked over and tested for the nth and, he fervently hoped, last time. But by Thursday everything was ready and he had time to drop in and see Prof.

Prof and Doc Adams were both

reading in the Orderly Room when he came in.

"How's the Mental Atomic Bomb coming," said Doc, looking over his bi-focals from his book.

Major Lang grinned. "Cut it out," he said and found himself a chair. The three of them smoked and thought in silence for awhile. "You know what's up, don't you?" Andy said at last.

"No, what's up?" said Prof, smiling.

"They're going to process the Other Side—en masse."

"Oh, well," said Prof and returned to his book. "Half a race is better than none."

Andy grinned and thought for a moment. After a bit he got up to go. Mighty interesting books, Prof's and Doc's.

"You know what you said once, Prof, about war maybe being unnatural? Archeologically-speaking, that is?"

"Yes, I remember. Why?" He put his book down. So did Doc.

"Well," said Andy. "I guess I just wanted you to know that—well, you *sold* that idea then. And that I haven't bought in on any others since. I just wanted you to know."

"Good!" said Prof, sucking on his pipe. "Thought you had. Wasn't exactly sure."

"Good luck, Andy," Doc Adams said, beaming at him.

"Thanks."

On L-Day, 0800 hours, Andy and Mark and Sally and the L-

Machine took off. Mark was Andy's side-kick. Kidding, Andy called him his adjutant. And the best lovin' adjutant with a screwdriver a CO ever had.

It was a little S-4 Fighter-Bomber and Sally flew it like a dream. Mark and Andy sat in back with the Love Machine.

"Nervous?" Mark said.

"A little."

Mark put his hand on his friend's knee. "I guess we've waited a long time for this, eh?"

Andy grinned. "About five thousand years, according to Prof." He yawned deeply, trying to get his heart back down in his chest where it belonged.

Mark elbowed him in the ribs, hard. "Hey, Sally!" he shouted. "Fly low and slow. We got a mighty precious egg in this basket and the boss here doesn't want it smashed before it's hatched!"

"Will do!" Sally shouted, and sent a grin careening back along the pilot's passageway.

"The way that girl smiles!" Mark said. "Does it get you the way it does me?"

"Worse," said Andy with his heart in his mouth again.

They flew lower and lower. Finally, a tower rose tall and lonely from the flat Iowa plain. Finally they were so low they could see the Mothers working in the fields. Sally buzzed them in a salute as she lowered the little ship toward the base of the tower.

"Careful!" Mark shouted as he

saw the startled faces of the Mothers. "They're carrying the future of the human race!"

Sally grinned back at them and careened around a telephone pole.

"That girl!" said Mark.

But Andy couldn't even smile.

They got out and carried the Love Machine to the base of the tower. The tower crew had orders to expect them, began letting down a net and line. They hoisted it in and while Sally paid out the guide line Andy and Mark ran up the tower stairs, taking turns holding it away from the tower. Finally, they got it over the railing and into the control-room.

"What is it? Eggs?" said one of the tower men, a staff-sergeant.

"You said it, bud," said Mark, laying out the nest. "Five-thousand-year-old eggs."

Andy went up to the transmitter room . . . Three steps to the right and up the metal stairs . . . He had gone through each move a thousand times.

"Set it up, Mark," he called over his shoulder. "I'll take care of the transmitter."

"Right!"

He heard with satisfaction the clatter of tools as Mark dumped out his bag on the floor.

The officer-in-charge, a 1st-Lieutenant, was in the transmitter room. *Good!* Andy thought. *He can help.*

"Which is your short-wave broadcasting band?" he asked the officer.

"Over here, Major."

"VHF?"

"That's right. And very long range. We punch at the Other Side with that."

"Good! Hook it up to your main broadcasting antenna."

"But, Major, sir! I thought *your* broadcast was to go out direct beam and over cables, sir. Colonel Schroeder expressly said—"

"I said *hook it up*, Lieutenant. That's an order!" Then, with just the right softening of the voice, he added casually, "There's been a switch in plans. We're going to use the short-wave first, *then* the direct beam antennas."

The young lieutenant looked relieved. "Yes, sir!" he said, and fell immediately to work.

Andy watched the poor fellow virtually undo a whole week's work. He had not been a cadet-captain for nothing! Andy sighed.

"Good work, Lieutenant," he said at last. "And you're sure you can put it back the way it was?"

"Yes, sir," said the lieutenant, happy now. "Why, I've got that crazy set-up the Colonel gave me practically memorized by heart! Must be some real big broadcast coming off, eh, Major?"

"That's right, Lieutenant." Andy grinned and backed out through the door.

Below, in the control room, Markham had got about halfway through the complicated business of tying in the Machine to the main station pick-up. The staff-

sergeant was contentedly going about his business. It was just another canned program to him. Sally Barrows was standing at the big window. Good! Lang knelt down to work beside Markham.

"Power on, sergeant?" he yelled, surprised at his own nervousness.

"Power on, Major. Any time you're ready, Major."

Good! About three more circuits left to go . . . He glanced at his watch as he worked. 0947. Good! Zero was to have been 1400 hours, the generals to start arriving about noon for the big show . . . Still another two hours to get things really checked over and . . .

"Andy!" It was Sally's voice—strident, high. She stood over them now, speaking fast and low so the sergeant wouldn't hear.

"Andy—Mark. There's a two-seater setting down out here. What do I do?"

"Some damn General," Mark muttered, working furiously, "came early to put one over on his buddies."

"Go back," Andy said. "See who it is." Only one more circuit to go.

She went back, kept them informed quietly. "It's down. Taxiing right up to the tower. Only one person getting out. White uniform. Andy—it's a woman!"

"*The Colonel!*" they said simultaneously and rushed to the window.

"The trouble with bright ideas," said Andy, "is that other people get them too." It was the Colonel all right. They watched her through the window until she was a quarter of the way up the tower stairs. They both noted that she was wearing a side-arm.

They turned from the window. Andy bawled, "Sergeant! Got any kind of weapon in here?"

"Yes, sir."

"Get it. Mark, get a raincoat, anything. That clothes locker over there . . . Fast!"

The sergeant, thoroughly scared, brought him a big service .45, on the run. Sally came up then, stood watching.

"Anything I can do, Major?" she asked.

"Yes, Sally, take this. Here, put this coat over it. Go down the stairs. Stop her, scare her, kill her—anything. But stop her. Mark and I need one and a half minutes to put this show on the road. Now, scoot!"

Already Lang was back at work. Without saying a word Sally flashed one last smile at Mark and dropped out of the tower door, running, the raincoat flapping in the wind.

As she ran they could hear her calling: "Colonel! Oh, Colonel! May I speak with you . . . ?"

Once in the silence that followed Mark looked up and stared at his friend. "What if she can't—" he began, then stopped.

Andy said, "Get back to work,

That's the only way you can save her, Mark. The *only* way. Sergeant, stand by that switch!"

And through a curtain of tears he watched his fingers race against time, against his love . . .

Finally they heard the shot.

Mark stood up, the screwdriver dropping from his startled hand. He ran to the window, looked down. His face was grim, white when he turned around.

"You killed Sally," he said quietly. "Now I'm going to kill *you*, Lang."

Major Lang punched the last jack home, stood up. Swiftly he threw a hard right as Mark lunged, hit his in-rushing face. He shouted in his anguish so that all the world might hear:

"THROW THAT SWITCH! SERGEANT, THROW THAT LOVIN' SWITCH!"

Then he stood, hands at his sides, eyes on the door, waiting . . .

The Colonel entered, carrying Sally's limp figure in her arms, as he knew she would. She paused in the doorway, teetering, her face wearing the expression he expected to see. A complete woman now, with hair awry, cradling Sally in her arms as if she were a child, tears streaming down her face. It was all as Andy knew it would be . . .

Colonel Schroeder was trying to say something as he came to her side, took Sally's limp form from her arms.

"She—Sally couldn't shoot me. Her finger froze on the trigger . . ." Her voice broke on a sob.

Andy nodded. "I know," he said gently.

"And I—I—" She looked bewildered. "I, who was the best shot in OCS, I—I missed target. Something happened to me. I aimed at her heart but when I was about to pull the trigger, I felt something hit me here—" She put a hand over her own heart. "My shot went wild, hit her in the shoulder . . ."

Andy nodded again, a little smile on his lips. "The Love Machine," he murmured. "It was turned on, just in time . . ."

Suddenly the tears streamed down her face. Andy turned away, cradling Sally gently in his arms. He carried her across the room, put her down beside the still unconscious Mark, stood looking at them a moment.

Then he went back to Colonel Schroeder, put his arm about her shoulders, urged her toward the door. She huddled against him, her hands clinging, sobs shaking her slim taut body.

As they reached the door the sergeant said, "What about this Machine, sir? It's still on . . ."

Andy grinned at him over his shoulder. "Turn it off, Sergeant. We won't be needing it any more." The waves had had enough time, he knew, to reach every living being on This Side of the Earth. So the War was over . . .

to
remember
charlie
by
by . . . Roger Dee

Just a one-eyed dog named Charlie and a crippled boy named Joey—but between them they changed the face of the universe . . . perhaps.

I NEARLY STUMBLED over the kid in the dark before I saw him.

His wheelchair was parked as usual on the tired strip of carpet grass that separated his mother's trailer from the one Doc Shull and I lived in, but it wasn't exactly where I'd learned to expect it when I rolled in at night from the fishing boats. Usually it was nearer the west end of the strip where Joey could look across the crushed-shell square of the Twin Palms trailer court and the palmetto flats to the Tampa highway beyond. But this time it was pushed back into the shadows away from the court lights.

The boy wasn't watching the flats tonight, as he usually did. Instead he was lying back in his chair with his face turned to the sky, staring upward with such absorbed intensity that he didn't even know I was there until I spoke.

"Anything wrong, Joey?" I asked.

He said, "No, Roy," without taking his eyes off the sky.

For a minute I had the prickly feeling you get when you are watching a movie and find that

The history of this materialistic world is highlighted with strange events that scientists and historians, unable to explain logically, have dismissed with such labels as "supernatural," "miracle," etc. But there are those among us whose simple faith can—and often does—alter the scheme of the universe. Even a little child can do it . . .

you know just what is going to happen next. You're puzzled and a little spooked until you realize that the reason you can predict the action so exactly is because you've seen the same thing happen somewhere else a long time ago. I forgot the feeling when I remembered why the kid wasn't watching the palmetto flats. But I couldn't help wondering why he'd turned to watching the sky instead.

"What're you looking for up there, Joey?" I asked.

He didn't move and from the tone of his voice I got the impression that he only half heard me.

"I'm moving some stars," he said softly.

I gave it up and went on to my own trailer without asking any more fool questions. How can you talk to a kid like that?

Doc Shull wasn't in, but for once I didn't worry about him. I was trying to remember just what it was about my stumbling over Joey's wheelchair that had given me that screwy double-exposure feeling of familiarity. I got a can of beer out of the ice-box because I think better with something cold in my hand, and by the time I had finished the beer I had my answer.

The business I'd gone through with Joey outside was familiar because it *had* happened before, about six weeks back when Doc and I first parked our trailer at the Twin Palms court. I'd nearly

stumbled over Joey that time too, but he wasn't moving stars then. He was just staring ahead of him, waiting.

He'd been sitting in his wheelchair at the west end of the carpet-grass strip, staring out over the palmetto flats toward the highway. He was practically holding his breath, as if he was waiting for somebody special to show up, so absorbed in his watching that he didn't know I was there until I spoke. He reminded me a little of a ventriloquist's dummy with his skinny, knob-kneed body, thin face and round, still eyes. Only there wasn't anything comical about him the way there is about a dummy. Maybe that's why I spoke, because he looked so deadly serious.

"Anything wrong, kid?" I asked.

He didn't jump or look up. His voice placed him as a cracker, either south Georgian or native Floridian.

"I'm waiting for Charlie to come home," he said, keeping his eyes on the highway.

Probably I'd have asked who Charlie was but just then the trailer door opened behind him and his mother took over.

I couldn't see her too well because the lights were off inside the trailer. But I could tell from the way she filled up the doorway that she was big. I could make out the white blur of a cigarette in her mouth, and when she struck

a match to light it—on her thumbnail, like a man—I saw that she was fairly young and not bad-looking in a tough, sullen sort of way. The wind was blowing in my direction and it told me she'd had a drink recently, gin, by the smell of it.

"This is none of your business, mister," she said. Her voice was Southern like the boy's but with all the softness ground out of it from living on the Florida coast where you hear a hundred different accents every day. "Let the boy alone."

She was right about it being none of my business. I went on into the trailer I shared with Doc Shull and left the two of them waiting for Charlie together.

Our trailer was dark inside, which meant first that Doc had probably gone out looking for a drink as soon as I left that morning to pick up a job, and second that he'd probably got too tight to find his way back. But I was wrong on at least one count, because when I switched on the light and dumped the packages I'd brought on the sink cabinet I saw Doc asleep in his bunk.

He'd had a drink, though. I could smell it on him when I shook him awake, and it smelled like gin.

Doc sat up and blinked against the light, a thin, elderly little man with bright blue eyes, a clipped brown mustache and scanty brown hair tousled and wild from

sleep. He was stripped to his shorts against the heat, but at some time during the day he had bathed and shaved. He had even washed and ironed a shirt; it hung on a nail over his bunk with a crumpled pack of cigarettes in the pocket.

"Crawl out and cook supper, Rip," I said, holding him to his end of our working agreement. "I've made a day and I'm hungry."

Doc got up and stepped into his pants. He padded barefoot across the linoleum and poked at the packages on the sink cabinet.

"Snapper steak again," he complained. "Roy, I'm sick of fish!"

"You don't catch sirloins with a hand-line," I told him. And because I'd never been able to stay sore at him for long I added, "But we got beer. Where's the opener?"

"I'm sick of beer, too," Doc said. "I need a real drink."

I sniffed the air, making a business of it. "You've had one already. Where?"

He grinned at me then with the wise-to-himself-and-the-world grin that lit up his face like turning on a light inside and made him different from anybody else on earth.

"The largess of Providence," he said, "is bestowed impartially upon sot and Samaritan. I helped the little fellow next door to the bathroom this afternoon while his mother was away at work, and my selflessness had its just reward."

Sometimes it's hard to tell when Doc is kidding. He's an educated man—used to teach at some Northern college, he said once, and I never doubted it—and talks like one when he wants to. But Doc's no bum, though he's a semi-alcoholic and lets me support him like an invalid uncle, and he's keen enough to read my mind like a racing form.

"No, I didn't batter down the cupboard and help myself," he said. "The lady—her name is Mrs. Ethel Pond—gave me the drink. Why else do you suppose I'd launder a shirt?"

That was like Doc. He hadn't touched her bottle though his insides were probably snarled up like barbed wire for the want of it. He'd shaved and pressed a shirt instead so he'd look decent enough to rate a shot of gin she'd offer him as a reward. It wasn't such a doubtful gamble at that, because Doc has a way with him when he bothers to use it; maybe that's why he bums around with me after the commercial fishing and migratory crop work, because he's used that charm too often in the wrong places.

"Good enough," I said and punctured a can of beer apiece for us while Doc put the snapper steaks to cook.

He told me more about our neighbors while we killed the beer. The Ponds were permanent residents. The kid—his name was Joey and he was ten—was a

polio case who hadn't walked for over a year, and his mother was a waitress at a roadside joint named the Sea Shell Diner. There wasn't any Mr. Pond. I guessed there never had been, which would explain why Ethel acted so tough and sullen.

We were halfway through supper when I remembered something the kid had said.

"Who's Charlie?" I asked.

Doc frowned at his plate. "The kid had a dog named Charlie, a big shaggy mutt with only one eye and no love for anybody but the boy. The dog isn't coming home. He was run down by a car on the highway while Joey was hospitalized with polio."

"Tough," I said, thinking of the kid sitting out there all day in his wheelchair, straining his eyes across the palmetto flats. "You mean he's been waiting a year?"

Doc nodded, seemed to lose interest in the Ponds, so I let the subject drop. We sat around after supper and polished off the rest of the beer. When we turned in around midnight I figured we wouldn't be staying long at the Twin Palms trailer court. It wasn't a very comfortable place.

I was wrong there. It wasn't comfortable, but we stayed.

I couldn't have said at first why we stuck, and if Doc could he didn't volunteer. Neither of us talked about it. We just went on living the way we were used to

living, a few weeks here and a few there, all over the States.

We'd hit the Florida west coast too late for the citrus season, so I went in for the fishing instead. I worked the fishing boats all the way from Tampa down to Fort Myers, not signing on with any of the commercial companies because I like to move quick when I get restless. I picked the independent deep-water snapper runs mostly, because the percentage is good there if you've got a strong back and tough hands.

Snapper fishing isn't the sport it seems to the one-day tourists who flock along because the fee is cheap. You fish from a wide-beamed old scow, usually, with hand-lines instead of regular tackle, and you use multiple hooks that go down to the bottom where the big red ones are. There's no real thrill to it, as the one-day anglers find out quickly. A snapper puts up no more fight than a catfish and the biggest job is to haul out his dead weight once you've got him surfaced.

Usually a pro like me sells his catch to the boat's owner or to some clumsy sport who wants his picture shot with a big one, and there's nearly always a jackpot—from a pool made up at the beginning of every run—for the man landing the biggest fish of the day. There's a knack to hooking the big ones, and when the jackpots were running good I only worked a day or so a week and spent the

rest of the time lying around the trailer playing cribbage and drinking beer with Doc Shull.

Usually it was the life of Riley, but somehow it wasn't enough in this place. We'd get about half-oiled and work up a promising argument about what was wrong with the world. Then, just when we'd got life looking its screwball funniest with our arguments one or the other of us would look out the window and see Joey Pond in his wheelchair, waiting for a one-eyed dog named Charlie to come trotting home across the palmetto flats. He was always there, day or night, until his mother came home from work and rolled him inside.

It wasn't right or natural for a kid to wait like that for anything and it worried me. I even offered once to buy the kid another mutt but Ethel Pond told me quick to mind my own business. Doc explained that the kid didn't want another mutt because he had what Doc called a psychological block.

"Charlie was more than just a dog to him," Doc said. "He was a sort of symbol because he offered the kid two things that no one else in the world could—security and independence. With Charlie keeping him company he felt secure, and he was independent of the kids who could run and play because he had Charlie to play with. If he took another dog now he'd be giving up more than Charlie. He'd be giving up

everything that Charlie had meant to him, then there wouldn't be any point in living."

I could see it when Doc put it that way. The dog had spent more time with Joey than Ethel had, and the kid felt as safe with him as he'd have been with a platoon of Marines. And Charlie, being a one-man dog, had depended on Joey for the affection he wouldn't take from anybody else. The dog needed Joey and Joey needed him. Together, they'd been a natural.

At first I thought it was funny that Joey never complained or cried when Charlie didn't come home, but Doc explained that it was all a part of this psychological block business. If Joey cried he'd be admitting that Charlie was lost. So he waited and watched, secure in his belief that Charlie would return.

The Ponds got used to Doc and me being around, but they never got what you'd call intimate. Joey would laugh at some of the droll things Doc said, but his eyes always went back to the palmetto flats and the highway, looking for Charlie. And he never let anything interfere with his routine.

That routine started every morning when old man Cloehessey, the postman, pedaled his bicycle out from Twin Palms to leave a handful of mail for the trailer-court tenants. Cloehessey would always make it a point to

ride back by way of the Pond trailer and Joey would stop him and ask if he's seen anything of a one-eyed dog on his route that day.

Old Cloehessey would lean on his bike and take off his sun helmet and mop his bald scalp, scowling while he pretended to think.

Then he'd say, "Not today, Joey," or, "Thought so yesterday, but this fellow had two eyes on him. 'Twasn't Charlie."

Then he'd pedal away, shaking his head. Later on the handyman would come around to swap sanitary tanks under the trailers and Joey would ask him the same question. Once a month the power company sent out a man to read the electric meters and he was part of Joey's routine too.

It was hard on Ethel. Sometimes the kid would dream at night that Charlie had come home and was scratching at the trailer ramp to be let in, and he'd wake Ethel and beg her to go out and see. When that happened Doc and I could hear Ethel talking to him, low and steady, until all hours of the morning, and when he finally went back to sleep we'd hear her open the cupboard and take out the gin bottle.

But there came a night that was more than Ethel could take, a night that changed Joey's routine and a lot more with it. It left a mark you've seen yourself —everybody has that's got eyes

to see—though you never knew what made it. Nobody ever knew that but Joey and Ethel Pond and Doc and me.

Doc and I were turning in around midnight that night when the kid sang out next door. We heard Ethel get up and go to him, and we got up too and opened a beer because we knew neither of us would sleep any more till she got Joey quiet again. But this night was different. Ethel hadn't talked to the kid long when he yelled, "Charlie! Charlie!" and after that we heard both of them bawling.

A little later Ethel came out into the moonlight and shut the trailer door behind her. She looked rumpled and beaten, her hair straggling damply on her shoulders and her eyes puffed and red from crying. The gin she'd had hadn't helped any either.

She stood for a while without moving, then she looked up at the sky and said something I'm not likely to forget.

"Why couldn't You give the kid a break?" she said, not railing or anything but loud enough for us to hear. "You, up there—what's another lousy one-eyed mutt to You?"

Doc and I looked at each other in the half-dark of our own trailer. "She's done it, Roy," Doc said.

I knew what he meant and wished I didn't. Ethel had finally told the kid that Charlie wasn't coming back, not ever.

That's why I was worried about Joey when I came home the next evening and found him watching the sky instead of the palmetto flats. It meant he'd given up waiting for Charlie. And the quiet way the kid spoke of moving the stars around worried me more, because it sounded outright crazy.

Not that you could blame him for going off his head. It was tough enough to be pinned to a wheelchair without being able to wiggle so much as a toe. But to lose his dog in the bargain . . .

I was on my third beer when Doc Shull rolled in with a big package under his arm. Doc was stone sober, which surprised me, and he was hot and tired from a shopping trip to Tampa, which surprised me more. It was when he ripped the paper off his package, though, that I thought he'd lost his mind.

"Books for Joey," Doc said. "Ethel and I agreed this morning that the boy needs another interest to occupy his time now, and since he can't go to school I'm going to teach him here."

He went on to explain that Ethel hadn't had the heart the night before, desperate as she was, to tell the kid the whole truth. She'd told him instead, quoting an imaginary customer at the Sea Shell Diner, that a tourist car with Michigan license plates had picked Charlie up on the highway and taken him away. It was a good enough story. Joey still

didn't know that Charlie was dead, but his waiting was over because no dog could be expected to find his way home from Michigan.

"We've got to give the boy another interest," Doc said, putting away the books and puncturing another beer can. "Joey has a remarkable talent for concentration—most handicapped children have—that could be the end of him if it isn't diverted into safe channels."

I thought the kid had cracked up already and said so.

"Moving stars?" Doc said when I told him. "Good Lord, Roy—"

Ethel Pond knocked just then, interrupting him. She came in and had a beer with us and talked to Doc about his plan for educating Joey at home. But she couldn't tell us anything more about the kid's new fixation than we already knew. When she asked him why he stared up at the sky like that he'd say only that he wants something to remember Charlie by.

It was about nine o'clock, when Ethel went home to cook supper. Doc and I knocked off our cribbage game and went outside with our folding chairs to get some air. It was then that the first star moved.

It moved all of a sudden, the way any shooting star does, and shot across the sky in a curving, blue-white streak of fire. I didn't

pay much attention, but Doc nearly choked on his beer.

"Roy," he said, "that was Sirius! *It moved!*"

I didn't see anything serious about it and said so. You can see a dozen or so stars zip across the sky on any clear night if you're in the mood to look up.

"Not serious, you fool," Doc said. "The *star* Sirius—the Dog Star, it's called—it moved a good sixty degrees, *then stopped dead!*"

I sat up and took notice then, partly because the star really had stopped instead of burning out the way a falling star seems to do, partly because anything that excites Doc Shull that much is something to think about.

We watched the star like two cats at a mouse-hole, but it didn't move again. After a while a smaller one did, though, and later in the night a whole procession of them streaked across the sky and fell into place around the first one, forming a pattern that didn't make any sense to us. They stopped moving around midnight and we went to bed, but neither of us got to sleep right away.

"Maybe we ought to look for another interest in life ourselves instead of drumming up one for Joey," Doc said. He meant it as a joke but it had a shaky sound. "Something besides getting beered up every night, for instance."

"You think we've got the d.t.'s from drinking beer?" I asked.

Doc laughed at that, sounding

more like his old self. "No, Roy. No two people ever had instantaneous and identical hallucinations."

"Look," I said. "I know this sounds crazy but maybe Joey—"

Doc wasn't amused any more. "Don't be a fool, Roy. If those stars really moved you can be sure of two things—Joey had nothing to do with it, and the papers will explain everything tomorrow."

He was wrong on one count at least.

The papers next day were packed with scareheads three inches high but none of them explained anything. The radio commentators quoted every authority they could reach, and astronomers were going crazy everywhere. It just couldn't happen, they said.

Doc and I went over the news column by column that night and I learned more about the stars than I'd learned in a lifetime. Doc, as I've said before, is an educated man, and what he couldn't recall offhand about astronomy the newspapers quoted by chapter and verse. They ran interviews with astronomers at Harvard Observatory and Mount Wilson and Lick and Flagstaff and God knows where else, but nobody could explain why all of those stars would change position then stop.

It set me back on my heels to learn that Sirius was twice as big as the Sun and more than twice as heavy, that it was three

times as hot and had a little dark companion that was more solid than lead but didn't give off enough light to be seen with the naked eye. This little companion—astronomers called it the "Pup" because Sirius was the Dog Star—hadn't moved, which puzzled the astronomers no end. I suggested to Doc, only half joking, that maybe the Pup had stayed put because it wasn't bright enough to suit Joey's taste, but Doc called me down sharp.

"Don't joke about Joey," he said sternly. "Getting back to Sirius—it's so far away that its light needs eight and a half years to reach us. That means it started moving when Joey was only eighteen months old. The speed of light is a universal constant, Roy, and astronomers say it can't be changed."

"They said the stars couldn't be tossed around like pool balls, too," I pointed out. "I'm not saying that Joey really moved those damn stars, Doc, but if he did he could have moved the light along with them, couldn't he?"

But Doc wouldn't argue the point. "I'm going out for air," he said.

I trailed along, but we didn't get farther than Joey's wheelchair.

There he sat, tense and absorbed, staring up at the night sky. Doc and I followed his gaze, the way you do automatically when somebody on the street ahead of you cranes his neck at

something. We looked up just in time to see the stars start moving again.

The first one to go was a big white one that slanted across the sky like a Roman candle fireball—zip, like that—and stopped dead beside the group that had collected around Sirius.

Doc said, "There went Altair," and his voice sounded like he had just run a mile.

That was only the beginning. During the next hour forty or fifty more stars flashed across the sky and joined the group that had moved the night before. The pattern they made still didn't look like anything in particular.

I left Doc shaking his head at the sky and went over to give Joey, who had called it a night and was hand-rolling his wheelchair toward the Pond trailer, a boost up the entrance ramp. I pushed him inside where Doc couldn't hear, then I asked him how things were going.

"Slow, Roy," he said. "I've got 'most a hundred to go, yet."

"Then you're really moving those stars up there?"

He looked surprised. "Sure, it's not so hard once you know how."

The odds were even that he was pulling my leg, but I went ahead anyway and asked another question.

"I can't make head or tail of it, Joey," I said. "What're you making up there?"

He gave me a very small smile.

"You'll know when I'm through," he said.

I told Doc about that after we'd bunked in, but he said I should not encourage the kid in his crazy thinking. "Joey's heard everybody talking about those stars moving, the radio newscasters blared about it, so he's excited too. But he's got a lot more imagination than most people, because he's a cripple, and he could go off on a crazy tangent because he's upset about Charlie. The thing to do is give him a logical explanation instead of letting him think his fantasy is a fact."

Doc was taking all this so hard—because it was upsetting things he'd taken for granted as being facts all his life, like those astronomers who were going nuts in droves all over the world. I didn't realize how upset Doc really was, though, till he woke me up at about 4:00 A.M.

"I can't sleep for thinking about those stars," he said, sitting on the edge of my bunk. "Roy, I'm scared."

That from Doc was something I'd never expected to hear. It startled me wide enough awake to sit up in the dark and listen while he unloaded his worries.

"I'm afraid," Doc said, "because what is happening up there isn't right or natural. It just can't be, yet it is."

It was so quiet when he paused that I could hear the blood swishing in my ears. Finally Doc said,

"Roy, the galaxy we live in is as delicately balanced as a fine watch. If that balance is upset too far our world will be affected drastically."

Ordinarily I wouldn't have argued with Doc on his own ground, but I could see he was painting a mental picture of the whole universe crashing together like a Fourth of July fireworks display and I was afraid to let him go on.

"The trouble with you educated people," I said, "is that you think your experts have got everything figured out, that there's nothing in the world their slide-rules can't pin down. Well, I'm an illiterate mugg, but I know that your astronomers can measure the stars till they're blue in the face and they'll never learn who *put* those stars there. So how do they know that whoever put them there won't move them again? I've always heard that if a man had faith enough he could move mountains. Well, if a man has the faith in himself that Joey's got maybe he could move stars, too."

Doc sat quiet for a minute.

"*There are more things, Horatio . . .*" he began, then laughed. "A line worn threadbare by three hundred years of repetition but as apt tonight as ever, Roy. Do you really believe Joey is moving those stars?"

"Why not?" I came back. "It's as good an answer as any the experts have come up with."

Doc got up and went back to his own bunk. "Maybe you're right. We'll find out tomorrow."

And we did. Doc did, rather, while I was hard at work hauling red snappers up from the bottom of the Gulf.

I got home a little earlier than usual that night, just before it got really dark. Joey was sitting as usual all alone in his wheelchair. In the gloom I could see a stack of books on the grass beside him, books Doc had given him to study. The thing that stopped me was that Joey was staring at his feet as if they were the first ones he'd ever seen, and he had the same look of intense concentration on his face that I'd seen when he was watching the stars.

I didn't know what to say to him, thinking maybe I'd better not mention the stars. But Joey spoke first.

"Roy," he said, without taking his eyes off his toes, "did you know that Doc is an awfully wise man?"

I said I'd always thought so, but why?

"Doc said this morning that I ought not to move any more stars," the kid said. "He says I ought to concentrate instead on learning how to walk again so I can go to Michigan and find Charlie."

For a minute I was mad enough to brain Doc Shull if he'd been handy. Anybody that would pull

a gag like that on a crippled, helpless kid . . .

"Doc says that if I can do what I've been doing to the stars then it ought to be easy to move my own feet," Joey said. "And he's right, Roy. So I'm not going to move any more stars. I'm going to move my feet."

He looked up at me with his small, solemn smile. "It took me a whole day to learn how to move that first star, Roy, but I could do this after only a couple of hours. Look . . ."

And he wiggled the toes on both feet.

It's a pity things don't happen in life like they do in books, because a first-class story could be made out of Joey Pond's knack for moving things by looking at them. In a book Joey might have saved the world or destroyed it, depending on which line would interest the most readers and bring the writer the fattest check, but of course it didn't really turn out either way. It ended in what Doc Shull called an anticlimax, leaving everybody happy enough except a few astronomers who like mysteries anyway or they wouldn't be astronomers in the first place.

The stars that had been moved stayed where they were, but the pattern they had started was never finished. That unfinished pattern won't ever go away, in case you've wondered about it—it's up there in the sky where you can see it any clear night—but it will never

be finished because Joey Pond lost interest in it when he learned to walk again.

Walking was a slow business with Joey at first because his legs had got thin and weak—partially atrophied muscles, Doc said—and it took time to make them round and strong again. But in a couple of weeks he was stumping around on crutches and after that he never went near his wheelchair again.

Ethel sent him to school at Sarasota by bus and before summer vacation time came around he was playing softball and fishing in the Gulf with a gang of other kids—on Sundays.

School opened up a whole new world to Joey and he fitted himself into the routine as neat as if he'd been doing it all his life. He learned a lot there and he forgot a lot that he'd learned for himself by being alone. Before we realized what was happening he was just like any other ten-year-old, full of curiosity and the devil, with no more power to move things by staring at them than anybody else had.

I think he actually forgot about those stars along with other things that had meant so much to him when he was tied to his wheelchair and couldn't do anything but wait and think.

For instance, a scrubby little terrier followed him home from Twin Palms one day and Ethel let him keep it. He fed the pup and

washed it and named it Dugan, and after that he never said anything more about going to Michigan to find Charlie. It was only natural, of course, because kids—normal kids—forget their pain quickly. It's a sort of defense mechanism, Doc says, against the disappointments of this life.

When school opened again in the fall Ethel sold her trailer and got a job in Tampa where Joey could walk to school instead of going by bus. When they were gone the Twin Palms trailer court was so lonesome and dead that Doc and I pulled out and went down to the Lake Okechobee country for the sugar cane season. We never heard from Ethel and Joey again.

We've moved several times since; we're out in the San Joaquin Valley just now, with the celery croppers. But everywhere we go we're reminded of them. Every time we look up at a clear night

sky we see what Doc calls the Joey Pond Stellar Monument, which is nothing but a funny sort of pattern roughed in with a hundred or so stars of all sizes and colors.

The body of it is so sketchy that you'd never make out what it's supposed to be unless you knew already what you were looking for. To us the head of a dog is fairly plain. If you know enough to fill in the gaps you can see it was meant to be a big shaggy dog with only one eye.

Doc says that footloose migrants like him and me forget old associations as quick as kids do—and for the same good reason—so I'm not especially interested now in where Ethel and Joey Pond are or how they're doing. But there's one thing I'll always wonder about, now that there's no way of ever knowing for sure.

I wish I'd asked Joey or Ethel, before they moved away, how Charlie lost that other eye.



Our next issue proudly presents a new short novel by PHILIP JOSE FARMER, the young man from Peoria who won high acclaim for himself as the author of the outstanding science-fiction novel of any year, "The Lovers." Phil has done it again in RASTIGNAC THE DEVIL, the rousing story of the survivors of the long Apocalyptic War that leaves Terrans prisoners of their own skins, and the desperate final revolt they make against the diabolical machinations of a Master Skin.

foundling on venus

by...

John & Dorothy de Courcy

The foundling could not have been more than three years old. Yet he held a secret that was destined to bring joy to many unhappy people.

UNLIKE GAUL, the north continent of Venus is divided into four parts. No Caesar has set foot here either, nor shall one—for the dank, stinging, caustic air swallows up the lives of men and only Venus may say, *I conquered*.

This is colonized Venus, where one may walk without the threat of sudden death—except from other men—the most bitterly fought for, the dearest, bloodiest, most worthless land in the solar system.

Separated by men into East and West at the center of the Twilight Zone, the division across the continent is the irregular, jagged line of Mud River, springing from the Great Serpent Range.

The African Republic holds one quarter which the Negroes exploit as best they can, encumbered by filter masks and protective clothing.

The Asians still actually try to colonize their quarter, while the Venusian primitives neither help nor hinder the bitter game of power-politics, secret murder, and misery—most of all, misery.

The men from Mars under-

Venus was the most miserable planet in the system, peopled by miserable excuses for human beings. And somewhere among this conglomeration of boiling protoplasm there was a being unlike the others, a being who walked and talked like the others but who was different—and afraid the difference would be discovered. You'll remember this short story.

stand this better, for their quarter is a penal colony. Sleepy-eyed, phlegmatic Martians, self-condemned for minute violations of their incredible and complex mores—without guards save themselves—will return to the subterranean cities, complex philosophies, and cool, dry air of Mars when they have declared their own sentences to be at an end.

Meanwhile, they labor to extract the wealth of Venus without the bitterness and hate, without the savagery and fear of their neighbors. Hence, they are regarded by all with the greatest suspicion.

The Federated States, after their fashion, plunder the land and send screaming ships to North America laden with booty and with men grown suddenly rich—and with men who will never care for riches or anything else again. These are the fortunate dead. The rest are received into the sloppy breast of Venus where even a tombstone or marker is swallowed in a few, short weeks. And they die quickly on Venus, and often.

From the arbitrary point where the four territories met, New Reno flung its sprawling, dirty carcass over the muddy soil and roared and hooted endlessly, laughed with the rough boisterousness of miners and space-men, rang with the brittle, brassy laughter of women following a

trade older than New Reno. It clanged and shouted and bellowed so loudly that quiet sobbing was never heard.

But a strange sound hung in the air, the crying of a child. A tiny child, a boy, he sat begrimed by mud at the edge of the street where an occasional ground car flung fresh contamination on his small form until he became almost indistinguishable from the muddy street. His whimpering changed to prolonged wailing sobs. He didn't turn to look at any of the giant passers-by nor did they even notice him.

But finally one passer-by stopped. She was young and probably from the Federated States. She was not painted nor was she well-dressed. She had nothing to distinguish her, except that she stopped.

"Oh, my!" she breathed, bending over the tiny form. "You poor thing. Where's your mama?"

The little figure rubbed its face, looked at her blankly and heaved a long, shuddering sigh.

"I can't leave you sitting here in the mud!" She pulled out a handkerchief and tried to wipe away some of the mud and then helped him up. His clothes were rags, his feet bare. She took him by the hand and as they walked along she talked to him. But he seemed not to hear.

Soon they reached the dirty, plastic front of the Elite Cafe.

Once through the double portals, she pulled the respirator from her face. The air inside was dirty and smelly but it was breathable. People were eating noisily, boisterously, with all the lusty, unclean young life that was Venus. They clamored, banged and threw things for no reason other than to throw them.

She guided the little one past the tables filled with people and into the kitchen. The door closed with a bang, shutting out much of the noise from the big room. Gingerly she sat him down on a stool, and with detergent and water she began removing the mud. His eyes were horribly red-rimmed.

"It's a wonder you didn't die out there," she murmured. "Poor little thing!"

"Hey! Are you going to work or aren't you, Jane?" a voice boomed.

A large ruddy man in white had entered the kitchen and he stood frowning at the girl. Women weren't rare on Venus, and she was only a waitress . . .

"What in the blue blazes is that!" He pointed to the child.

"He was outside," the girl explained, "sitting in the street. He didn't have a respirator."

The ruddy man scowled at the boy speculatively. "His lungs all right?"

"He isn't coughing much," she replied.

"But what are you going to do

with him?" the man asked Jane.

"I don't know," she said. "Something. Tell the Patrol about him, I guess."

The beefy man hesitated. "It's been a long time since I've seen a kid this young on Venus. They always ship 'em home. Could have been dumped. Maybe his parents left him on purpose."

The girl flinched.

He grunted disgustedly, his face mirroring his thoughts. *Stringy hair . . . plain face . . . and soft as Venus slime clear through!* He shrugged. "Anyway, he's got to eat." He looked at the small figure. "Want to eat, kid? Would you like a glass of milk?" He opened a refrigerator, took out a plastic bottle and poured milk in a glass.

Chubby hands reached out for the glass.

"There, that's better," the cook said. "Pete will see that you get fed all right." He turned to the girl. "Could he belong to someone around here?"

Jane shook her head. "I don't know. I've never seen him before."

"Well, he can stay in the kitchen while you work the shift. I'll watch him."

She nodded, took an apron down from a hook and tied it around her waist. Then she patted the sober-faced youngster on his tousled head and left.

The beefy man studied the boy. "I think I'll put you over

there," he said. He lifted him, stool and all, and carried him across the kitchen. "You can watch through that panel. See? That's Jane in there. She'll come back and forth, pass right by here. Is that all right?"

The little one nodded.

"Oh?" Pete raised his eyebrows. "So you *do* know what I'm saying." He watched the child for a few minutes, then turned his attention to the range. The rush hour was on and he soon forgot the little boy on the stool . . .

Whenever possible during the lunch-hour rush, Jane stopped to smile and talk to the child. Once she asked, "Don't you know where your mama and daddy are?"

He just stared at her, unblinking, his big eyes soft and sad looking.

The girl studied him for a moment, then she picked up a cookie and gave it to him. "Can you tell me your name?" she asked hopefully.

His lips parted. Cookie crumbs fell off his chin and from the corners of his mouth, but he spoke no words.

She sighed, turned, and went out to the clattering throng with laden plates of food.

For a while Jane was so busy she almost forgot the young one. But finally people began to linger more over their food, the clinking of dishes grew quieter

and Pete took time for a cup of coffee. His sweating face was haggard. He stared sullenly at the little boy and shook his head.

"Shouldn't be such things as kids," he muttered. "Nothing but a pain in the neck!"

Jane came through the door. "It gets worse all the time," she groaned. She turned to the little boy. "Did you have something to eat?"

"I didn't know what to fix for him," Pete said. "How about some beef stew? Do you think he'd go for that?"

Jane hesitated. "I—I don't know. Try it."

Pete ladled up a bowl of steaming stew. Jane took it and put it on the table. She took a bit on a spoon, blew on it, then held it out. The child opened his mouth. She smiled and slowly fed him the stew.

"How old do you think he is?" Pete asked.

The girl hesitated, opened her mouth, but said nothing.

"About two and a half, I'd guess," Pete answered himself. Maybe three." Jane nodded and he turned back to cleaning the stove.

"Don't you want some more stew?" Jane asked as she offered the small one another spoonful.

The little mouth didn't open.

"Guess you've had enough," she said, smiling.

Pete glanced up. "Why don't you leave now, Jane. You're

going to have to see the Patrol about that kid. I can take care of things here."

She stood thinking for a moment. "Can I use an extra respirator?"

"You can't take him out without one!" Pete replied. He opened a locker and pulled out a transparent facepiece. "I think this'll tighten down enough to fit his face.

She took it and walked over to the youngster. His large eyes had followed all her movements and he drew back slightly as she held out the respirator. "It won't hurt," she coaxed. "You have to wear it. The air outside stings."

The little face remained steady but the eyes were fearful as Jane slid the transparent mask over his head and tightened the elastic. It pulsed slightly with his breathing.

"Better wrap him in this," Pete suggested, pulling a duroplast jacket out of the locker. "Air's tough on skin."

The girl nodded, pulling on her own respirator. She stepped quickly into her duroplast suit and tied it. "Thanks a lot, Pete," she said, her voice slightly muffled. "See you tomorrow."

Pete grunted as he watched her wrap the tiny form in the jacket, lift it gently in her arms, then push through the door.

The girl walked swiftly up the street. It was quieter now, but in a short time the noise and

stench and garishness of New Reno would begin rising to another cacophonous climax.

The strange pair reached a wretched metal structure with an askew sign reading, "El Grande Hotel." Jane hurried through the double portals, the swish of air flapping her outer garments as the air conditioning unit fought savagely to keep out the rival atmosphere of the planet.

There was no one at the desk and no one in the lobby. It was a forlorn place, musty and damp. Venus humidity seemed to eat through everything, even metal, leaving it limp, faded, and stinking.

She hesitated, looked at the visiphone, then impulsively pulled a chair over out of the line of sight of the viewing plate and gently set the little boy on it. She pulled the respirator from her face, pressed the button under the blank visiphone disk. The plate lit up and hummed faintly.

"Patrol Office," Jane said.

There was a click and a middle-aged square-faced man with blue-coated shoulders appeared "Patrol Office," he repeated.

"This is Jane Grant. I work at the Elite Cafe. Has anyone lost a little boy?"

The patrolman's eyebrows raised slightly. "Little boy? Did you find one?"

"Well—I—I saw one earlier this evening," she faltered. "He was sitting at the edge of the

street and I took him into the cafe and fed him."

"Well, there aren't many children in town," he replied. "Let's see." He glanced at a record sheet. "No, none's reported missing. He with you now?"

"Ah—no."

He shook his head again, still looking downward. He said slowly, "His parents must have found him. If he was wandering we'd have picked him up. There is a family that live around there who have a ten year old kid who wanders off once in a while. Blond, stutters a little. Was it him?"

"Well, I—" she began. She paused, said firmly, "No."

"Well, we don't have any reports on lost children. Haven't had for some time. If the boy was lost his parents must have found him. Thank you for calling." He broke the connection.

Jane stood staring at the blank plate. No one had reported a little boy missing. In all the maddening confusion that was New Reno, no one had missed a little boy.

She looked at the small bundle, walked over and slipped off his respirator. "I should have told the truth," she murmured to him softly. "But you're so tiny and helpless. Poor little thing!"

He looked up at her, then around the lobby, his brown eyes resting on first one object, then another. His little chin began to quiver.

The girl picked him up and stroked his hair. "Don't cry," she soothed. "Everything's going to be all right."

She walked down a hall, fumbling inside her coveralls for a key. At the end of the hall she stopped, unlocked a door, and carried him inside. As an afterthought she locked the door, still holding the small bundle in her arms. Then she placed him on a bed, removed the jacket and threw it on a chair.

"I don't know why I should go to all this trouble," she said, removing her protective coveralls. "I'll probably get picked up by the Patrol. But *somebody's* got to look after you."

She sat down beside him. "Aren't you even a bit sleepy?"

He smiled a little.

"Maybe now you can tell me your name," she said. "Don't you know your name?"

His expression didn't change.

She pointed to herself. "Jane." Then she hesitated, looked downward for a moment. "Jana, I was called before I came here."

The little face looked up at her. The small mouth opened. "Jana." It was half whisper, half whistle.

"That's right," she replied, stroking his hair. "My, but your throat must be sore. I hope you won't be sick from breathing too much of that awful air."

She regarded him quizzically. "You know, I've never seen many

little boys. I don't quite know how to treat one. But I know you should get some sleep."

She smiled and reached over to take off the rags. He pulled away suddenly.

"Don't be afraid," she said reassuringly. "I wouldn't hurt you."

He clutched the little ragged shirt tightly.

"Don't be afraid," she repeated soothingly. "I'll tell you what. You lie down and I'll put this blanket over you," she said, rising. "Will that be all right?"

She laid him down and covered the small form with a blanket. He lay there watching her with his large eyes.

"You don't look very sleepy," she said. "Perhaps I had better turn the light down." She did so, slowly, so as not to alarm him. But he was silent, watchful, never taking his eyes from her.

She smiled and sat down next to him. "Now I'll tell you a story and then you must go to sleep," she said softly.

He smiled—just a little smile—and she was pleased.

"Fine," she cried. "Well—once upon a time there was a beautiful planet, not at all like this one. There were lovely flowers and cool-running streams and it only rained once in a while. You'd like it there for it's a very nice place. But there were people there who liked to travel—to

see strange places and new things, and one day they left in a great big ship."

She paused again, frowning in thought. "Well, they traveled a long, long way and saw many things. Then one day something went wrong."

Her voice was low and soft. It had the quality of a dream, the texture of a zephyr, but the little boy was still wide awake.

"Something went very, very wrong and they tried to land so they could fix it. But when they tried to land they found they couldn't—and they fell and just barely managed to save themselves. The big, beautiful ship was all broken. Well, since they couldn't fix the ship at all now they set out on foot to find out where they were and to see if they could get help. Then they found that they were in a land of great big giants, and the people were very fierce."

The little boy's dark eyes were watching her intently but she went on, hardly noticing.

"So they went back to the broken ship and tried to decide what to do. They couldn't get in trouble with their home because the radio part of the ship was all broken up. And the giants were horrible and wanted everything for themselves and were cruel and mean and probably would have hurt the poor ship-wrecked people if they had known they were there.

"So—do you know what they did? They got some things from the ship and they went and built a giant. And they put little motors inside and things to make it run and talk so that the giants wouldn't be able to tell that it wasn't another giant just like themselves."

She paused, straightening slightly.

"And then they made a space inside the giant where somebody could sit and run this big giant and talk and move around—and the giants wouldn't ever know that she was there. They made it a *she*. In fact, she was the only person who could do it because she could learn to talk all sorts of languages—that's what she could do best. So she went out in the giant suit and mingled with the giants and worked just like they did.

"But every once in a while she'd go back to the others, bringing them things they needed.

And she would bring back news. That was their only hope—news of a ship which might be looking for them, which might take them home—"

She broke off. "I wonder what the end of the story will be?" she murmured.

For some time she had not been using English. She had been speaking in a soft, fluid language unlike anything ever heard on Venus. But now she had stopped speaking entirely.

After a slight pause—another voice spoke—in the same melodious, alien tongue! It said, "I think I know the end of the story. I think someone has come for you poor people and is going to take you home."

She gasped—for she realized it had not been her voice. Her artificial eyes watched, stunned, as the little boy began peeling off a skin-tight, flexible baby-faced mask, revealing underneath the face of a little man.

In line with our policy of keeping the quality of the short stories for FANTASTIC UNIVERSE on the same high level as the feature length fiction, we shall bring to you in our next issue some very fine new science-fiction writing by the following well-known fantasy writers: JACK WILLIAMSON, CARL JACOBI, C. H. LIDDELL, EVAN HUNTER, ROBERT BLOCH, GEORGE WHITLEY, BRYCE WALTON and AL REYNOLDS. There will be a wide range of variety in plot, also, for we feel that in this vast fantastic universe in which we live the story of the fantasy it contains could never be covered merely by stories concerned only with the influence of science and scientific inventions; there is also the mind and the spirit of man to be considered, and the fantasy they enfold.

the
man
from
time

by . . . Frank Belknap Long

Deep in the Future he found the answer to Man's age-old problem.

DARING MOONSON, he was called. It was a proud name, a brave name. But what good was a name that rang out like a summons to battle if the man who bore it could not repeat it aloud without fear?

Moonson had tried telling himself that a man could conquer fear if he could but once summon the courage to laugh at all the sins that ever were, and do as he damned well pleased. An ancient phrase that—damned well. It went clear back to the Elizabethan Age, and Moonson had tried picturing himself as an Elizabethan man with a ruffle at his throat and a rapier in his clasp, brawling lustily in a tavern.

In the Elizabethan Age men had thrown caution to the winds and lived with their whole bodies, not just with their minds alone. Perhaps that was why, even in the year 3689, defiant names still cropped up. Names like Independence Forest and Man, Live Forever!

It was not easy for a man to live up to a name like Man, Live Forever! But Moonson was ready to believe that it could be done. There was something in human

The method by which one man might be pinpointed in the vastness of all Eternity was the problem tackled by the versatile Frank Belknap Long in this story. And as all minds of great perceptiveness know, it would be a simple, human quality he'd find most effective even in solving Time-Space.

nature which made a man abandon caution and try to live up to the claims made for him by his parents at birth.

It must be bad, Moonson thought. It must be bad if I can't control the trembling of my hands, the pounding of the blood at my temples. I am like a child shut up alone in the dark, hearing rats scurrying in a closet thick with cobwebs and the tapping of a blind man's cane on a deserted street at midnight.

Tap, tap, tap—nearer and nearer through the darkness. How soon would the rats be swarming out, blood-fanged and wholly vicious? How soon would the cane strike?

He looked up quickly, his eyes searching the shadows. For almost a month now the gleaming intricacies of the machine had given him a complete sense of security. As a scholar traveling in Time he had been accepted by his fellow travelers as a man of great courage and firm determination.

For twenty-seven days a smooth surface of shining metal had walled him in, enabling him to grapple with reality on a completely adult level. For twenty-seven days he had gone pridefully back through Time, taking creative delight in watching the heritage of the human race unroll before him like a cineramoscope under glass.

Watching a green land in the

dying golden sunlight of an age lost to human memory could restore a man's strength of purpose by its serenity alone. But even an age of war and pestilence could be observed without torment from behind the protective shields of the Time Machine. Danger, accidents, catastrophe could not touch him personally.

To watch death and destruction as a spectator in a traveling Time Observatory was like watching a cobra poised to strike from behind a pane of crystal-bright glass in a zoological garden.

You got a tremendous thrill in just thinking: How dreadful if the glass should not be there! How lucky I am to be alive, with a thing so deadly and monstrous within striking distance of me!

For twenty-seven days now he had traveled without fear. Sometimes the Time Observatory would pinpoint an age and hover over it while his companions took painstaking historical notes. Sometimes it would retrace its course and circle back. A new age would come under scrutiny and more notes would be taken.

But a horrible thing that had happened to him, had awakened in him a lonely nightmare of restlessness. Childhood fears he had thought buried forever had returned to plague him and he had developed a sudden, terrible dread of the fogginess outside the moving viewpane, the way the machine itself wheeled and dipped when

an ancient ruin came sweeping toward him. He had developed a fear of Time.

There was no escape from that Time Fear. The instant it came upon him he lost all interest in historical research. 1069, 732, 2407, 1928—every date terrified him. The Black Plague in London, the Great Fire, the Spanish Armada in flames off the coast of a bleak little island that would soon mold the destiny of half the world—how meaningless it all seemed in the shadow of his fear!

Had the human race really advanced so much? Time had been conquered but no man was yet wise enough to heal himself if a stark, unreasoning fear took possession of his mind and heart, giving him no peace.

Moonson lowered his eyes, saw that Rutella was watching him in the manner of a shy woman not wishing to break in too abruptly on the thoughts of a stranger.

Deep within him he knew that he had become a stranger to his own wife and the realization sharply increased his torment. He stared down at her head against his knee, at her beautiful back and sleek, dark hair. Violet eyes she had, not black as they seemed at first glance but a deep, lustrous violet.

He remembered suddenly that he was still a young man, with a young man's ardor surging strong in him. He bent swiftly, kissed her lips and eyes. As he did so

her arms tightened about him until he found himself wondering what he could have done to deserve such a woman.

She had never seemed more precious to him and for an instant he could feel his fear lessening a little. But it came back and was worse than before. It was like an old pain returning at an unexpected moment to chill a man with the sickening reminder that all joy must end.

His decision to act was made quickly.

The first step was the most difficult but with a deliberate effort of will he accomplished it to his satisfaction. His secret thoughts he buried beneath a continuous mental preoccupation with the vain and the trivial. It was important to the success of his plan that his companions should suspect nothing.

The second step was less difficult. The mental block remained firm and he succeeded in carrying on actual preparations for his departure in complete secrecy.

The third step was the final one and it took him from a large compartment to a small one, from a high-arching surface of metal to a maze of intricate control mechanism in a space so narrow that he had to crouch to work with accuracy.

Swiftly and competently his fingers moved over instruments of science which only a completely sane man would have known how

to manipulate. It was an acid test of his sanity and he knew as he worked that his reasoning faculties at least had suffered no impairment.

Beneath his hands the Time Observatory's controls were solid shafts of metal. But suddenly as he worked he found himself thinking of them as fluid abstractions, each a milestone in man's long progress from the jungle to the stars. Time and space—mass and velocity.

How incredible that it had taken centuries of patient technological research to master in a practical way the tremendous implications of Einstein's original postulate. Warp space with a rapidly moving object, move away from the observer with the speed of light—and the whole of human history assumed the firm contours of a landscape in space. Time and space merged and became one. And a man in an intricately-equipped Time Observatory could revisit the past as easily as he could travel across the great curve of the universe to the farthest planet of the farthest star.

The controls were suddenly firm in his hands. He knew precisely what adjustments to make. The iris of the human eye dilates and contracts with every shift of illumination, and the Time Observatory had an iris too. That iris could be opened without endangering his companions in the

least—if he took care to widen it just enough to accommodate only one sturdily built man of medium height.

Sweat came out in great beads on his forehead as he worked. The light that came through the machine's iris was faint at first, the barest glimmer of white in deep darkness. But as he adjusted controls the light grew brighter and brighter, beating in upon him until he was kneeling in a circle of radiance that dazzled his eyes and set his heart to pounding.

I've lived too long with fear, he thought. I've lived like a man imprisoned, shut away from the sunlight. Now, when freedom beckons, I must act quickly or I shall be powerless to act at all.

He stood erect, took a slow step forward, his eyes squeezed shut. Another step, another—and suddenly he knew he was at the gateway to Time's sure knowledge, in actual contact with the past for his ears were now assailed by the high confusion of ancient sounds and voices!

He left the Time machine in a flying leap, one arm held before his face. He tried to keep his eyes covered as the ground seemed to rise to meet him. But he lurched in an agony of unbalance and opened his eyes—to see the green surface beneath him flashing like a suddenly uncovered jewel.

He remained on his feet just long enough to see his Time Observatory dim and vanish. Then

his knees gave way and he collapsed with a despairing cry as the fear enveloped him . . .

There were daisies in the field where he lay, his shoulders and naked chest pressed to the earth. A gentle wind stirred the grass, and the flute-like warble of a song bird was repeated close to his ear, over and over with a tireless persistence.

Abruptly he sat up and stared about him. Running parallel to the field was a winding country road and down it came a yellow and silver vehicle on wheels, its entire upper section encased in glass which mirrored the autumnal landscape with a startling clearness.

The vehicle halted directly in front of him and a man with ruddy cheeks and snow-white hair leaned out to wave at him.

"Good morning, mister!" the man shouted. "Can I give you a lift into town?"

Moonson rose unsteadily, alarm and suspicion in his stare. Very cautiously he lowered the mental barrier and the man's thoughts impinged on his mind in bewildering confusion.

He's not a farmer, that's sure . . . must have been swimming in the creek, but those bathing trunks he's wearing are out of this world!

Huh! I wouldn't have the nerve to parade around in trunks like that even on a public beach.

Probably an exhibitionist . . . But why should he wear 'em out here in the woods? No blonds or redheads to knock silly out here!

Huh! He might have the courtesy to answer me . . . Well, if he doesn't want a lift into town it's no concern of mine!

Moonson stood watching the vehicle sweep away out of sight. Obviously he had angered the man by his silence, but he could answer only by shaking his head.

He began to walk, pausing an instant in the middle of the bridge to stare down at a stream of water that rippled in the sunlight over moss-covered rocks. Tiny silver fish darted to and fro beneath a tumbling waterfall and he felt calmed and reassured by the sight. Shoulders erect now, he walked on . . .

It was high noon when he reached the tavern. He went inside, saw men and women dancing in a dim light, and there was a huge, rainbow-colored musical instrument by the door which startled him by its resonance. The music was wild, weird, a little terrifying.

He sat down at a table near the door and searched the minds of the dancers for a clue to the meaning of what he saw.

The thoughts which came to him were startlingly primitive, direct and sometimes meaningless to him.

Go easy, baby! Swing it! Sure, we're in the groove now, but you

never can tell! I'll buy you an orchid, honey! Not roses, just one orchid—black like your hair! Ever see a black orchid, hon? They're rare and they're expensive!

Oh, darl, darl, hold me closer! The music goes round and round! It will always be like that with us, honey! Don't ever be a square! That's all I ask! Don't ever be a square! Cuddle up to me, let yourself go! When you're dancing with one girl you should never look at another! Don't you know that, Johnny!

Sure I know it, Doll! But did I ever claim I wasn't human?

Darl, doll, doll baby! Look all you want to! But if you ever dare—

Moonson found himself relaxing a little. Dancing in all ages was closely allied to love-making, but it was pursued here with a careless rapture which he found creatively stimulating. People came here not only to dance but to eat, and the thoughts of the dancers implied that there was nothing stylized about a tavern. The ritual was a completely natural one.

In Egyptian bas-reliefs you saw the opposite in dancing. Every movement rigidly proscribed, arms held rigid and sharply bent at the elbows. Slow movements rather than lively ones, a bowing and a scraping with bowls of fruit extended in gift offerings at every turn.

There was obviously no en-

throned authority here, no be-jeweled king to pacify when emotions ran wild, but complete freedom to embrace joy with corybantic abandonment.

A tall man in ill-fitting black clothes approached Moonson's table, interrupting his reflections with thoughts that seemed designed to disturb and distract him out of sheer perversity. So even here there were flies in every ointment, and no dream of perfection could remain unchallenged.

He sat unmoving, absorbing the man's thoughts.

What does he think this is, a bath house? Mike says it's okay to serve them if they come in from the beach just as they are. But just one quick beer, no more. This late in the season you'd think they'd have the decency to get dressed!

The sepulchrally-dressed man gave the table a brush with a cloth he carried, then thrust his head forward like an ill-tempered scavenger bird.

"Can't serve you anything but beer. Boss' orders. Okay?"

Moonson nodded and the man went away.

Then he turned to watching the girl. She was frightened. She sat all alone, plucking nervously at the red-and-white checkered table-cloth. She sat with her back to the light, bunching the cloth up into little folds, then smoothing it out again.

She'd ground out lipstick-

smudged cigarettes until the ash tray was spilling over.

Moonson began to watch the fear in her mind . . .

Her fear grew when she thought that Mike wasn't gone for good. The phone call wouldn't take long and he'd be coming back any minute now. And Mike wouldn't be satisfied until she was broken into little bits. Yes, Mike wanted to see her on her knees, begging him to kill her!

Kill me, but don't hurt Joe! It wasn't his fault! He's just a kid—he's not twenty yet, Mike!

That would be a lie but Mike had no way of knowing that Joe would be twenty-two on his next birthday, although he looked eighteen at most. There was no pity in Mike but would his pride let him hot-rod an eighteen-year-old?

Mike won't care! Mike will kill him anyway! Joe couldn't help falling in love with me, but Mike won't care what Joe could help! Mike was never young himself, never a sweet kid like Joe!

Mike killed a man when he was fourteen years old! He spent seven years in a reformatory and the kids there were never young. Joe will be just one of those kids to Mike . . .

Her fear kept growing.

You couldn't fight men like Mike. Mike was strong in too many different ways. When you ran a tavern with an upstairs room for special customers you had to

be tough, strong. You sat in an office and when people came to you begging for favors you just laughed. Ten grand isn't hay, buddy! My wheels aren't rigged. If you think they are get out. It's your funeral.

It's your funeral, Mike would say, laughing until tears came into his eyes.

You couldn't fight that kind of strength. Mike could push his knuckles hard into the faces of people who owed him money, and he'd never even be arrested.

Mike could take money crisp and new out of his wallet, spread it out like a fan, say to any girl crazy enough to give him a second glance: "I'm interested in you, honey! Get rid of him and come over to my table!"

He could say worse things to girls too decent and self-respecting to look at him at all.

You could be so cold and hard nothing could ever hurt you. You could be Mike Galante . . .

How could she have loved such a man? And dragged Joe into it, a good kid who had made only one really bad mistake in his life —the mistake of asking her to marry him.

She shivered with a chill of self-loathing and turned her eyes hesitantly toward the big man in bathing trunks who sat alone by the door.

For a moment she met the big man's eyes and her fears seemed to fade away! She stared at

him . . . sunburned almost black. Muscles like a lifeguard. All alone and not on the make. When he returned her stare his eyes sparkled with friendly interest, but no suggestive, flirtatious intent.

He was too rugged to be really handsome, she thought, but he wouldn't have to start digging in his wallet to get a girl to change tables, either.

Guiltily she remembered Joe, now it could only be Joe.

Then she saw Joe enter the room. He was deathly pale and he was coming straight toward her between the tables. Without pausing to weigh his chances of staying alive he passed a man and a woman who relished Mike's company enough to make them eager to act ugly for a daily handout. They did not look up at Joe as he passed but the man's lips curled in a sneer and the woman whispered something that appeared to fan the flames of her companion's malice.

Mike had friends—friends who would never rat on him while their police records remained in Mike's safe and they could count on him for protection.

She started to rise, to go to Joe and warn him that Mike would be coming back. But despair flooded her and the impulse died. The way Joe felt about her was a thing too big to stop . . .

Joe saw her slim against the

light, and his thoughts were like the sea surge, wild, unruly.

Maybe Mike will get me. Maybe I'll be dead by this time tomorrow. Maybe I'm crazy to love her the way I do . . .

Her hair against the light, a tumbled mass of spun gold.

Always a woman bothering me for as long as I can remember. Molly, Anne, Janice . . . Some were good for me and some were bad.

You see a woman on the street walking ahead of you, hips swaying, and you think: I don't even know her name but I'd like to crush her in my arms!

I guess every guy feels like that about every pretty woman he sees. Even about some that aren't so pretty. But then you get to know and like a woman, and you don't feel that way so much. You respect her and you don't let yourself feel that way.

Then something happens. You love her so much it's like the first time again but with a whole lot added. You love her so much you'd die to make her happy.

Joc was shaking when he slipped into the chair left vacant by Mike and reached out for both her hands.

"I'm taking you away tonight," he said. "You're coming with me."

Joe was scared, she knew. But he didn't want her to know. His hands were like ice and his fear

blended with her own fear as their hands met.

"He'll kill you, Joe! You've got to forget me!" she sobbed.

"I'm not afraid of him. I'm stronger than you think. He won't dare come at me with a gun, not here before all these people. If he comes at me with his fists I'll hook a solid left to his jaw that will stretch him out cold!"

She knew he wasn't deceiving himself. Joe didn't want to die any more than she did.

The Man from Time had an impulse to get up, walk over to the two frightened children and comfort them with a reassuring smile. He sat watching, feeling their fear beating in tumultuous waves into his brain. Fear in the minds of a boy and a girl because they desperately wanted one another!

He looked steadily at them and his eyes spoke to them . . .

Life is greater than you know. If you could travel in Time, and see how great is man's courage—if you could see all of his triumphs over despair and grief and pain—you would know that there is nothing to fear! Nothing at all!

Joe rose from the table, suddenly calm, quiet.

"Come on," he said quietly. "We're getting out of here right now. My car's outside and if Mike tries to stop us I'll fix him!"

The boy and the girl walked toward the door together, a young and extremely pretty girl and a

boy grown suddenly to the full stature of a man.

Rather regretfully Moonson watched them go. As they reached the door the girl turned and smiled and the boy paused too—and they both smiled suddenly at the man in the bathing trunks.

Then they were gone.

Moonson got up as they disappeared, left the tavern.

It was dark when he reached the cabin. He was dog-tired, and when he saw the seated man through the lighted window a great longing for companionship came upon him.

He forgot that he couldn't talk to the man, forgot the language difficulty completely. But before this insurmountable element occurred to him he was inside the cabin.

Once there he saw that the problem solved itself—the man was a writer and he had been drinking steadily for hours. So the man did all of the talking, not wanting or waiting for an answer.

A youngish, handsome man he was, with graying temples and keenly observant eyes. The instant he saw Moonson he started to talk.

"Welcome, stranger," he said. "Been taking a dip in the ocean, eh? Can't say I'd enjoy it, this late in the season!"

Moonson was afraid at first that his silence might discourage the writer, but he did not know writers . . .

"It's good to have someone to talk to," the writer went on. "I've been sitting here all day trying to write. I'll tell you something you may not know—you can go to the finest hotels, and you can open case after case of the finest wine, and you still can't get started sometimes."

The writer's face seemed suddenly to age. Fear came into his eyes and he raised the bottle to his lips, faced away from his guest as he drank as if ashamed of what he must do to escape despair every time he faced his fear.

He was trying to write himself back into fame. His greatest moment had come years before when his golden pen had glorified a generation of madcaps.

For one deathless moment his genius had carried him to the heights, and a white blaze of publicity had given him a halo of glory. Later had come lean and bitter years until finally his reputation dwindled like a gutted candle in a wintry room at midnight.

He could still write but now fear and remorse walked with him and would give him no peace. He was cruelly afraid most of the time.

Moonson listened to the writer's thoughts in heart-stricken silence—thoughts so tragic they seemed out of keeping with the natural and beautiful rhythms of his speech. He had never imagined that a sensitive and imaginative

man—an artist—could be so completely abandoned by the society his genius had helped to enrich.

Back and forth the writer paced, baring his inmost thoughts . . . His wife was desperately ill and the future looked completely black. How could he summon the strength of will to go on let alone to write?

He said fiercely, "It's all right for you to talk—"

He stopped, seeming to realize for the first time that the big man sitting in an easy chair by the window had made no attempt to speak.

It seemed incredible, but the big man had listened in complete silence, and with such quiet assurance that his silence had taken on an eloquence that inspired absolute trust.

He had always known there were a few people like that in the world, people whose sympathy and understanding you could take for granted. There was a fearlessness in such people which made them stand out from the crowd, stone-markers in a desert waste to lend assurance to a tired wayfarer by its sturdy permanence, its sun-mirroring strength.

There were a few people like that in the world but you sometimes went a lifetime without meeting one. The big man sat there smiling at him, calmly exuding the serenity of one who has seen life from its tangled, inaccessible roots outward and testifies

from experience that the entire growth is sound.

The writer stopped pacing suddenly and drew himself erect. As he stared into the big man's eyes his fears seemed to fade away. Confidence returned to him like the surge of the sea in great shining waves of creativeness.

He knew suddenly that he could lose himself in his work again, could tap the bright resonant bell of his genius until its golden voice rang out through eternity. He had another great book in him and it would get written now. It would get written . . .

"You've helped me!" he almost shouted. "You've helped me more than you know. I can't tell you how grateful I am to you. You don't know what it means to be so paralyzed with fright that you can't write at all!"

The Man from Time was silent but his eyes shone curiously.

The writer turned to a book-case and removed a volume in a faded cover that had once been bright with rainbow colors. He sat down and wrote an inscription on the flyleaf.

Then he rose and handed the book to his visitor with a slight bow. He was smiling now.

"This was my first-born!" he said.

The Man from Time looked at the title first . . . THIS SIDE OF PARADISE.

Then he opened the book and

read what the author had written on the flyleaf:

*With warm gratefulness
for a courage which brought
back the sun.*

F. Scott Fitzgerald.

Mansoon bowed his thanks, turned and left the cabin.

Morning found him walking across fresh meadowlands with the dew glistening on his bare head and broad, straight shoulders.

They'd never find him he told himself hopelessly. They'd never find him because Time was too vast to pinpoint one man in such a vast waste of years. The towering crests of each age might be visible but there could be no returning to one tiny insignificant spot in the mighty ocean of Time.

As he walked his eyes searched for the field and the winding road he'd followed into town. Only yesterday this road had seemed to beckon and he had followed, eager to explore an age so primitive that mental communication from mind to mind had not yet replaced human speech.

Now he knew that the speech faculty which mankind had long outgrown would never cease to act as a barrier between himself and the men and women of this era of the past. Without it he could not hope to find complete understanding and sympathy here.

He was still alone and soon winter would come and the sky grow cold and empty . . .

The Time machine materialized so suddenly before him that for an instant his mind refused to accept it as more than a torturing illusion conjured up by the turbulence of his thoughts. All at once it towered in his path, bright and shining, and he moved forward over the dew-drenched grass until he was brought up short by a joy so overwhelming that it seemed to him that his heart must burst.

Rutella emerged from the machine with a gay little laugh, as if his stunned expression was the most amusing in the world.

"Hold still and let me kiss you, darling," her mind said to his.

She stood in the dew-bright grass on tiptoe, her sleek dark hair falling to her shoulders, an extraordinarily pretty girl to be the wife of a man so tormented.

"You found me!" his thoughts exulted. "You came back alone and searched until you found me!"

She nodded, her eyes shining. So Time wasn't too vast to pinpoint after all, not when two people were so securely wedded in mind and heart that their thoughts could build a bridge across Time.

"The Bureau of Emotional Adjustment analyzed everything I told them. Your psycho-graph ran to fifty-seven pages, but it was your desperate loneliness which guided me to you."

She raised his hand to her lips and kissed it.

"You see, darling, a compulsive fear isn't easy to conquer. No man or woman can conquer it alone. Historians tell us that when the first passenger rocket started out for Mars, Space Fear took men by surprise in the same way your fear gripped you. The loneliness, the utter desolation of space, was too much for a human mind to endure."

She smiled her love. "We're going back. We'll face it together and we'll conquer it together. You won't be alone now. Darling, don't you see—it's because you aren't a clod, because you're sensitive and imaginative that you experience fear. It's not anything to be ashamed of. You were simply the first man on Earth to develop a new and completely different kind of fear—Time Fear."

Moonson put out his hand and gently touched his wife's hair.

Ascending into the Time Observatory a thought came unbidden into his mind: *Others he saved, himself he could not save.*

But that wasn't true at all now.

He could help himself now. He would never be alone again! When guided by the sure hand of love and complete trust, self-knowledge could be a shining weapon. The trip back might be difficult, but holding tight to his wife's hand he felt no misgivings, no fear.

shipwreck in the sky

by . . . Eando Binder

The flight into space that made Pilot-Capt. Dan Barstow famous.

THE FLIGHT was listed at GHQ as *Project Songbird*. It was sponsored by the Space Medicine Labs of the U.S. Air Force. And its pilot was Captain Dan Barstow.

A hand-picked man, Dan Barstow, chosen for the AF's most important project of the year because he and his VX-3 had already broken all previous records set by hordes of V-2s, Navy Aerobees and anything else that flew the skyways.

Dan Barstow, first man to cross the sea of air and sight open, unlimited space. Pioneer flight to infinity. He grinned and hummed to himself as he settled down for the long jaunt. Too busy to be either thrilled or scared he considered the thirty-seven instruments he'd have to read, the twice that many records to keep, and the miles of camera film to run. He had been hand-picked and thoroughly conditioned to take it all without more than a ten percent increase in his pulse rate. So he worked as matter-of-factly as if he were down in the Gs Centrifuge of the Space Medicine Labs where he had been schooled for this trip for months.

There is a warm feeling about welcoming back into the pages of a science fiction magazine the work of a writer who is a legend in the genre. So, here's Binder and a neatly wrapped-up package of a folktale of the future.

He kept up a running fire of oral reports through his helmet radio, down to Rough Rock and his CO. "All Roger, sir . . . temperature falling fast but this rubberoid space suit keeps me cozy, no chills . . . Doc Blaine will be happy to hear that! Weightless sensations pretty queer and I feel upside-down as much as rightside-up, but no bad effects . . . Taking shots of the sun's corona now with color film . . . huh? Oh, yes, sir, it's beautiful all right, now that you mention it. But, hell, sir, who's got the time for aesthetics now? . . . Oops, *that* was a close one! Tenth meteor whizzing past. Makes me think of flak back on those Berlin bombing runs."

Dan couldn't help wincing when the meteors peppered down past. The "flak" of space. Below he could see the meteors flare up brightly as they hit the atmosphere. Most of those near his position were small, none bigger than a baseball, and Dan took comfort in the fact that his rocket was small too, in the immensity around him. A direct hit would be sheer bad luck, but the good old law of averages was on his side.

"Yes, Colonel, this tin can I'm riding is holding together okay," Dan continued to Rough Rock. If he paused even a second in his reports a top-sergeant's yell from the Colonel's throat came back for him to keep talking. Every

bit of information he could transmit to them was a vital revelation in this USAF-Alpha exploration of open space beyond Earth's air cushion, with ceiling unlimited to infinity.

"Cosmic rays, sir? Sure, the reading shot up double on the Geiger . . . huh? Naw, I don't feel a thing . . . like Doc Baird suspected, we invented a lot of Old Wive's Tales in *advance*, before going into space. I feel fine, so you can put down cosmic ray intensity as a Boogey Man . . . What's that? Yeah, yeah, sir, the stars shine without winking up here. What else? . . . Space is inky black—no deep purples or queer more-than-blacks like some jetted-up writers dreamed up—just plain old ordinary dead black. Earth, sir? . . . Well, it does look dish-shaped from up here, concave . . . Sure, I can see all the way to Europe and —say! Here's something unexpected. I can see that hurricane off the coast of Florida . . . You said it, sir! Once we install permanent space stations up here it will be easy to spot typhoons, volcano eruptions, tidal waves, earthquakes, what have you, the moment they start. If you ask me, with a good telescope you could even spot forest fires the minute they broke out, not to mention a sneak bombing on a target city—uh, sorry, sir, I forgot."

Dan broke off and almost

retched as his stomach turned a flip-flop to end all flip-flops. The VX-3 had reached the peak of its trajectory at over 1000 miles altitude and now turned down, lazily at first. He gulped oxygen from the emergency tube at his lips and felt better.

"Turning back on schedule, Rough Rock. Peak altitude 1037 miles. Everything fine, no danger. This was all a cinch . . . HEY! Wait . . . Something not in the books has popped up . . . stand by!"

Dan had felt the rocket swing a bit, strangely, as if gripped by a strong force. Instead of falling directly down toward Earth with a slight pitch, it slanted sideways and spun on its long axis. And then Dan saw what it was . . .

Beneath, intercepting his trajectory, coming around fast over the curvature of Earth, was a tiny black worldlet, 998 miles above Earth. It might be an enormous meteor, but Dan felt he was right the first time. For it wasn't falling like a meteor but swinging parallel to Earth's surface on even keel.

He stared at the unexpected discovery, as amazed as if it were a fire-breathing dragon out of legend. For it was, actually, he realized in swift, stunned comprehension, more amazing than any legend.

Dan kept his voice calm. "Hello, Rough Rock . . . Listen . . . nobody expected *this* . . .

hold your hat, sir, and sit down. I've discovered a *second moon* of Earth! . . . Uhhuh, you heard me right! a second moon! Tie that, will you? . . . Sure, it's tiny, less than a mile in diameter I'd say. Dead black in color. Guess that's why telescopes never spotted it. Tiny and black, blends into the black backdrop of space. It has terrific speed. And that little maverick's gravitational field caught my rocket . . . Of course it can't yank me away from Earth gravity, but the trouble is—yipe! my rocket and that moonlet may be in for a mutual *collision* course . . . "

Dan's trained eye suddenly saw that grim possibility. Barreling around Earth in a narrow orbit with a speed of something near or over 12,000 miles an hour the tiny new moon had, since his ascent, charged directly into his downward free fall. It was a chance in a thousand for a direct hit, except for one added factor—the moonlet exerted enough gravity pull out of its many-million ton bulk to warp the rocket into its path. And the thousand-to-one odds were thus wiped out, becoming even money.

"Nip and tuck," reported Dan, answering the excited pleadings and questions from Rough Rock. "It won't be a head-on crash. I may even miss entirely . . . Oh, Lord! Not with that spire of rock sticking up from it . . . I'm going to hit that . . ."

Dan had heard an atomic bomb blast once and it sounded like a string of them set off at once as the rocket smashed into the rocky prominence. The rock splintered. The rocket splintered. But Dan was not there to be splintered likewise. He had jammed down a button, at the critical moment, and the rocket's emergency escape-hatch had ejected him a split-second before the violent impact.

But Dan blacked out, receiving some of the concussion of the exploding rocket. When his eyes snapped open he was floating like a feather in open, airless space. His rubberoid space suit, living up to its rigid tests, had inflated to its elastic limit. But it held and within its automatic units began feeding him oxygen, heat and radio-power. He had a chance, now, because he had been ejected cleanly from the rocket, without damage to the protective suit.

The stars wheeled dizzily around him. Dan finally saw the reason why. He was not just floating as a free agent in space. He was circling the black moonlet, at perhaps a thousand yards from its pitted surface.

"Hello, Rough Rock," he called. "Still alive and kicking, sir. Only now, of all crazy-mad things, I'm a moon of *this* moon! The collision must have knocked me clear out of my down-to-Earth orbit . . . I must have been

ejected in the same direction as the moonlet's course, in its gravity field . . . I don't know. Let an electronic brain figure it out some time . . . Anyway, now I'm being dragged along in the orbit of the moonlet—how about *that*? Yes, sir, I'm circling down closer and closer to the moonlet . . . No, don't worry, sir. It was a weak gravity pull, only a fraction of an Earth-g. So I'm drifting down gently as a cloud . . . Stand by for my landing on Earth's second moon!"

The bloated figure in the bulging space suit circled the black stony surface several more times, in a narrowing spiral, and finally landed with a soft skidding bump that didn't even jar Dan's teeth. He bounced several times from a diminishing height of fifty-odd feet in grotesque slow-motion before he finally came to a stop.

He sat still for a moment, adjusting to the fantastic fact of being shipwrecked on an uncharted moonlet, crowding down his pulse rate which might be over ten percent normal now.

"Okay, Rough Rock, I hear you . . . You're telling me, sir? . . . Obviously, I'm *marooned* here. No rocket to leave with. No way to get back to terra firma . . . what? If you'll pardon my saying so, sir, that's a silly question . . . Of course I'm scared! Scared green. Sorry about the rocket, sir, losing it for you

. . . Me, sir? Thank you, sir. But stop apologizing, will you? I know you haven't got any duplicates of the VX-3 ready, no rescue rocket . . ."

Dan listened a moment longer then broke in roughly. "Oh, for Pete's sake, will you stop crying over me, sir? So I get mine here. I might have gotten it over Berlin, too. Forget it—sir."

Dan grinned suddenly. "Look, what have I got to kick about? I'll go out in a flash of glory—at least one headline will put it that way—and I'll get credit in the history books as the man who discovered that Earth has *two* moons! What more could I ask, really?"

Dan blushed at the reply from Rough Rock. "Will you lay off please, Colonel? How else should a man take it? I'm still scared silly inside. But, look, I've really got something to report now. This little runt moon makes tracks around Earth in probably two hours minus. If I remember my Spaconautics right I'm already looking down over the Grand Canyon, heading west. I'm going to get a pretty terrific bird's-eye view of the whole world in two more hours, which is just about how much oxygen I've got left . . . Lucky, eh?"

Dan looked down, watching in fascination the majestic wheeling of the Earth below him. His little moonlet did not rotate, or rather it rotated once for each

revolution around Earth, as the Moon did, keeping one face earthward, giving him an uninterrupted view. The Sierras on Earth hove into clear view and the broad Pacific. There would follow Hawaii, then Japan, Asia, Europe . . . No, he saw he was slanting southwest. It would be across the equator, past Australia, perhaps near the South Pole, then up around over the top of the world past Greenland, following that great circle around the globe. In any case, his was the speediest trip around the world ever made by man!

"Before we're out of mutual range, Rough Rock, I'm going to explore this new moon. Me and Columbus! Stand by for reports."

Dan did his walking in huge leaps that propelled him fifty feet at a step with slight effort, due to the extremely feeble gravity of the tiny body. What did he weigh here? Probably no more than an ounce or two.

"Nothing much to report, Colonel. It's a dead, airless pipsqueak planetoid, just a big mile-thick rock, probably. No life, no vegetation, no people, no nothing. Guess you might call me the Man in the Second Moon—and the joke's on me! Well, one and three-quarter hours of oxygen left, by the gauge, or 105 minutes—sounds like more than way . . . What's that, sir? Your voice is getting faint. Any last requests from me? Well, one favor may-

be. Pick up my body some day with another rocket . . . Yeah, it'll stay preserved up here in this deep-freeze of space . . . Thanks, sir . . . Can't hear you much now. Going out of range. Give Betty my fondest. You know, the blonde . . . Well, sir —goodbye now."

Dan was glad that Rough Rock's radio voice faded to a whispery nothingness. It wasn't easy to stay casual now. There was nothing more to say, really, and he didn't want to hear any more crying from the CO. The Old Man has sounded almost hysterical. He wanted just to be alone with his thoughts now, making his final peace with the universe . . .

He checked the gauge with his watch—ninety minutes of oxygen to zero. Or, he thought with a grin, eternity minus ninety minutes.

He was beginning to have trouble breathing. But it was awesomely grand, watching the sweep of Earth beneath him, the procession of dots that were islands strung across the Pacific South Seas like a necklace of green beads. He was still within radio range of ships below at sea. Yet he didn't contact them. He had nothing to say, like a ghost in the sky.

Idly, he kept pitching loose stones, watching their rifle-like speed away from him. Again a phenomenon of the weak gravity

of the moonlet. Actually, he was able to pick up a boulder ten feet across and heave it away with ease. *We who are about to die amuse ourselves*, he thought. Then, because a thread of stubborn hope still clung in a corner of his mind, he got an idea. It had lurked just beyond his mental grasp for some time now. Something significant . . .

Abruptly, face alight, Dan switched on his radio and contacted a ship below, asking them to relay him to Rough Rock with their more powerful transmitter.

"Ahoy, Rough Rock! Stop adding up my insurance, Colonel! I'm coming back . . . No, sir, I haven't gone out of my head, sir. It's so simple it's a laugh, sir . . . See you in a few hours, sir!"

And he did.

Dan grinned when they hauled his dripping form from the sea. Aboard the search plane they cut him out of the space suit to which was still attached his emergency twin parachute. But his helmet was gone, ripped loose, for Dan had been breathing fresh Earth air during the long parachute descent.

They stared at him as at a dead man come alive.

"Impossible to escape?" He chuckled, repeating their babble. "That's what I thought too, until I remembered those data tables on gravity and Escape Velocity and such—how, on the Moon,

the Escape Velocity is much less than on Earth. And on that tiny second moon—well, my clue was when I threw a stone into the air and it never came back."

Dan gulped hot coffee.

"I got off the moonlet myself then, got up to more than a mile above it where I was free of its feeble gravity. But I was still in the same orbit circling Earth. I'd have continued revolving as a human satellite forever, of course, but for this emergency gadget hooked to my belt."

Dan held up the metal gun with its empty tank and needle-nose half burned away.

"Reaction pistol. Fires hydrazine and oxydizer, ordinary jet-rocket principle. Aiming it toward the stars, opposite earth, its reactive blasts shoved me Earthward, thanks to Newton. I needed a speed of about one-half mile a second. The powerful little jet gun had only my small mass to shove in free space, without gravity or friction. That broke me from free-fall *around* Earth to gravity-fall *toward* Earth.

"Then I spiraled down under gravity pull. I reached lung-filling air density just in time, before my oxygen gave out. One more danger was that I began heating up like a meteor due to air friction. I flung out a prayer first, followed by my twin parachutes, designed for extreme initial shock. They held. Slowed me to a paratrooper's drift the rest of the way down."

"Wait," a puzzled pilot objected. "Your story doesn't hang together. How did you get off that moonlet? How did you get up there, a mile above it, away from its gravity? There was nobody to throw *you*, like a stone."

"I threw myself," said Dan. "First I ran as fast as I could, maybe halfway around that moonlet, to get a good running start. And then—"

Dan Barstow's grin then was undoubtedly the biggest grin in history . . .

"Well, then, since the feeble gravity couldn't pull me back again, what I really did was to jump clear off that moon."



the
second
voice

by . . . Mann Rubin

Spud, world-famous dummy, talks to Mars with surprising results.

CRAWFORD COMPLETED the rehearsal in less than an hour. He listened to the orchestra run through its selections, okayed the song the guest vocalist had chosen, then finished up with a long dialogue between Spud and himself. When it was over he checked timing with the program director, made a few script changes and conferred briefly with a Special Service Officer about the number of troops the auditorium could hold. Everything was running smoothly. It was going to be a neat, action-packed show.

Backstage he looked at his watch. He had almost two hours before the regular show began and he was restless. Two hours at Harlow Field could seem like two years. Guards and restrictions all over the place.

Harlow Field was the largest experimental base in the world, a veritable garden of atoms, the proving grounds for every secret weapon ever imagined. The security and the tight regulations gave Crawford the jitters on each of his visits.

We proudly enter a new name in the science-fiction sweepstakes. This is Mr. Rubin's initial appearance in the field. His literary efforts to date add up quite handsomely, we think. QUOTE. I have sold to the TV show, TALES OF TOMORROW and two literary quarterlies have published my fiction. Last year I won the Stephen Vincent Benét Award for my one-act plays produced at Stanford University, UNQUOTE. The reading pleasure is yours.

He smoked a cigarette and tried making small talk with some of the soldiers on backstage detail. He posed for a picture and gave an interview to a reporter from an Army newspaper, then excused himself and went to his dressing room with Spud propped in the crook of his arm.

He was used to it now; the applause, the audiences, the pictures, the autographs, the fuss. Everywhere the response was the same. They had either seen him in the movies or on television or in the nightclubs, where he first broke in his act. Now they wanted to establish an identity with him, to touch the merchandise, to stand close so that they could write home about the visiting celebrity. Crawford was a realist. It was all part of being a name.

It had taken him just five years to make the big time. Five years of road shows, coast-to-coast tours, one night stands and a dummy named Spud to make him the hottest ventriloquist in the business. His act was tight, well-paced and popular. He had a weekly radio show, a television program and a seven-year contract with a major Hollywood studio. He was riding high.

Still he hadn't forgotten the soldiers. Two months each year he took time off to travel the USO circuit. His agent tore his hair, reminding him of the financial losses, but the USO had given him his first break so he

had always answered their call. He liked enthusiastic audiences and the cheering of laugh-hungry men made him happy. Entertainment was his business and he enjoyed exhibiting his talent. The wider the audience the better he liked it.

His dressing room was located back of the auditorium. He closed the door behind him, put Spud on a chair and began getting out of his rehearsal clothes. He lit a cigarette and looked at himself in the mirror. He was tired and needed a shave. In the last week the pace had been fast. The USO tour still had a few days to run, but he was looking forward to its end. A vacation, the luxury of relaxation would all be his then.

He opened a drawer of the dressing table and pulled out a bottle of Scotch. There were two hours to be killed before the show. He drank a shot and thought about it. A shower, a shave, a good dinner and a walk around the base would consume the time. After the show he would drive back to town and check in at a hotel for a good night's sleep.

He was putting the bottle back in the drawer when a knock sounded on the door. He said "Come in," thinking it was one of the cast and didn't turn around. He heard the door open, glanced into the mirror and glimpsed Colonel Meadows, the Commanding Officer of Harlow Field, and a man in civilian clothes he didn't

recognize. He turned around, reached for a bathrobe.

"Don't mind us, Robbie," said the Colonel. "Just dropped by to say hello." He was a small, plump man and his face was always red and perspiring. Crawford knew him slightly from the other two times he had played Harlow Field, but this was the first time the Colonel had ever paid him a backstage visit.

"Got a fan here who wants to meet you," continued the Colonel. "Shake hands with Dr. Paul Shalt, one of our base scientists. He and I just caught your rehearsal. Fine, very fine."

The doctor's name struck a chord and Crawford dug deep until it focused. Dr. Paul Shalt was a physicist working with the army. He specialized in the development of radar, was the chief developer of the electrical detonator used in atomic bombs.

"I enjoyed your performance very much," said Dr. Shalt. "Your voice is extraordinary." He had a smooth, angular face, black hair and black, penetrating eyes. "Amazing range."

"Thanks," said Crawford.

"And the clearness of tone is phenomenal," said Dr. Shalt. "Has it always been like that?"

Crawford nodded. "When I was a kid it embarrassed me, my voice," he said, smiling. "A trick voice, everybody called it. But it's a definite asset to a practitioner of the art of ventriloquism."

"You should have seen Dr. Shalt while you were on stage," said Colonel Meadows, beaming at him. "He was running all over the auditorium testing your voice with one of his gadgets."

Crawford grinned. "I didn't realize I moved my audience so."

Dr. Shalt laughed. "What Colonel Meadows says is true. I'm *very* interested in your vocal range. While you rehearsed I tested the quality and sound of your tone." He stopped, looked around the room until he discovered Spud where Crawford had put him on the chair. He walked over to the dummy and touched the wooden head with his hand.

"Actually it's a *second voice*, that sound and vibration you use for Spud. It's perfect, perfect for what I need, that second voice."

Dr. Shalt put the dummy back in the position he had found him in, reached into his pocket and brought out a small glass-enclosed instrument which he held in front of him.

"Do you know what this is?" he asked, approaching the dressing table.

"Never saw it before," Crawford said, examining the gadget. A small arrow flickered nervously within a glass cage.

"It's called a Voice Oscillator," explained Dr. Shalt. "It's sensitive to the slightest tonal inflection. We use it to measure the

pitch and volume of a human voice."

"What's all this got to do with me?" Crawford asked.

"This—we want to use the voice of Spud for an experiment. A very important experiment. With your permission, we'd like to do it immediately."

"I'm afraid that's impossible," said Crawford. "I have a show in about—"

"Our equipment is all set up," interrupted the Doctor. "The entire test will take forty-five minutes. We'll have you back in no time."

Crawford frowned. He was tired and he'd looked forward to relaxing a while before the show. "Couldn't we make it some other time," he said.

The Colonel spoke then. "Robbie, do you remember reading four years ago that our radar system was able to beam signals to the moon and have them returned?"

"Sure," said Crawford. "It got a big play in all the newspapers."

"Well, our scientists are now ready to conduct a similar experiment," said Colonel Meadows. "This time to Mars."

"To Mars!" repeated Crawford, wondering what it had to do with him.

"Only this time we plan to send a *voice*, a human voice that can travel through interstellar space," said Dr. Shalt.

"But that's impossible!" Crawford exclaimed.

"With the average voice, yes," said Dr. Shalt. "Cosmic disturbances would drown out a normal voice amplified a thousand times beyond its regular frequency. But a voice in a higher octave—like your second voice . . . Well, we believe there's a certain resonant intonation which can be curved and regulated in any direction, in the voice you use for your dummy."

Crawford nodded.

"Spud's voice contains that quality," continued Dr. Shalt. "I believe it can reach Mars and bounce back. I'm asking you to be the first man ever to throw his voice to another planet."

There was quiet for a moment when he finished. Crawford's cigarette had gone out and he relit it. The smoke steadied him. Outside, in the auditorium the orchestra had begun to rehearse again.

"Where's the station set-up?" asked Crawford finally.

"It's right here on the field, Robbie," Colonel Meadows said quickly. "We've had it under wraps for the last eight months. It'll be a tremendous thing if it works."

Crawford dragged on his cigarette a last time and stamped it out. He walked over to Spud, lifted the dummy into position in the crook of his arm.

"What do you say, Crawford?"

asked Dr. Shalt. There was a note of urgency in his voice.

"I don't know," said Crawford slowly. "My crazy voice is my bread and butter. Can't you use somebody else? Somebody whose voice isn't his life?"

"We've wasted weeks testing every man on this field," said Dr. Shalt solemnly. "The average voice becomes static as soon as it gets past Earth's atmosphere. But your voice can break through. I've studied every vibration, every quiver of it. It bends and flexes with each cosmic pressure. You must let us try."

Crawford looked at Colonel Meadows.

"Robbie, I promise you there's no danger involved," the Colonel said. "There's been a great deal of time and effort put into this project and we'd like to see it work. This week Mars and Earth are the closest they'll be for the next three years, so it must be done now. It's your duty to help in this important project."

Crawford nodded. The matter of patriotism and duty had not occurred to him. "Of course, Colonel, I'll be glad to help."

He looked down at the dummy. "What do you say, Spud? Want to be the first voice to reach Mars?"

"Sounds crazy," came the high, squeaking reply. "But it ought to put us in the history books." Spud's glass eyes shifted to the other two men in the room and

one lid winked. "Calling Mars! This is Spud O'Malley, old quiver voice himself, coming in for a landing."

"Good! You'll do it," said Dr. Shalt excitedly. "And if we succeed the publicity will be worldwide."

"Sure," said Crawford. "An actor likes publicity. But are you sure my voice won't be strained?"

"I'm sure," Dr. Shalt said. "You'll be talking into a microphone in the same tone you use for a broadcast. Nothing more."

"How long will it take?" asked Crawford.

Dr. Shalt checked his watch. "Fifteen minutes for the voice to reach Mars and fifteen minutes for its return." He took out a black notebook from his jacket pocket and began to outline the plan while Colonel Meadows put through a call to the laboratory.

Spud's voice was to be relayed directly to a giant amplifying unit which would project it into space. Those regulating the voice in the control room would hear nothing but vibrations because of the high frequency it would immediately attain while passing through. Only on its return from Mars would Spud's voice become audible on Earth. It sounded fantastic but Dr. Shalt spoke of it as if it were a certainty and Crawford knew he was recognized as a great scientist.

A few minutes later Colonel Meadows hung up the phone. He said excitedly, "Everything's

set. All the equipment is ready and there's a command car waiting outside."

Crawford caught a quick glimpse of himself in the mirror. No shower, no shave, no quiet dinner, no walk; all that would have to come later. He'd been hooked. "I'm ready any time you are," he said. He folded Spud in his arms and followed the two men to the door.

They did not speak much in the car. The laboratory was on the Northern rim of the field, a ten minute drive from the auditorium. Approaching the building, Crawford noticed the high radar towers and the steel fences surrounding its frame. They rode past three different guard posts and numerous military policemen before the car halted at the main entrance.

Immediately they were ushered into a small broadcasting studio which was soundproofed and closed off by a heavy metal door. This was Dr. Shalt's home grounds and he took charge.

A microphone had been set up and Dr. Shalt had Crawford test Spud's voice while a technician in the control booth measured it acoustically. After an exact tone had been determined for the amplification unit, Dr. Shalt briefed him on some details, patted him on the back and disappeared into the control booth followed by Colonel Meadows.

Crawford lit another cigarette

and smoked nervously while he awaited the go-ahead signal. There was a dry tightness in his throat and he concentrated on relaxing his tension.

High on the studio wall a large clock hacked away at the seconds and behind the glass façade of the control booth he could see Dr. Shalt and his assistant manipulating dials on an intricate panel. It was almost three minutes before he heard another sound beside the creak of his own impatient footsteps. Then Dr. Shalt's voice came on the feed-back, the speaker system connecting the studio with the booth.

"Crawford, talk into the mike when we flash you the sign. Keep talking for a minute. And remember—it's just another broadcast. Good luck."

Crawford nodded, deposited the cigarette in an ashtray. He moved into position and slid his fingers along the inner wires of Spud's back until they fitted into place. Spud's head came alive.

Dr. Shalt brought his right hand down in a long, sweeping motion. A bright red bulb above the control booth winked into life. Robbie Crawford went into his act.

Inside the booth Dr. Shalt, Colonel Meadows and a technician watched Crawford performing in pantomime and listened to the strange vibrations emanating from the speaker. They could distinguish no understandable sound for the amplifier had lifted the

voice beyond human hearing as it released it to the stratosphere. They sat quietly, content to wait for the voice to return from its long, lonely journey.

Crawford spoke until he saw Dr. Shalt signal for a conclusion. A moment later the red bulb blinked out and the broadcast was ended. Crawford felt cold and his hands were perspiring freely. He saw the beaming face of Colonel Meadows motioning him to come inside the booth. He wiped his face, and coughed to relieve the tension in his throat.

The Colonel was the first to greet him as he entered the booth, and his handshake was enthusiastic and firm. Dr. Shalt remained bent over one of the instrument boards rotating a dial, but looked up and nodded excitedly.

"It will be another ten minutes," he said. "Sit down. I've sent out for some supper."

"How did it go?" Crawford asked.

"Good! Good! By now it's half way to its destination."

An orderly came in with a tray of sandwiches and coffee and for the next few minutes they ate and Dr. Shalt described the intricacies of the operation. The technician stayed glued to the receiver, earphones resting lightly across his head.

After ten minutes Dr. Shalt stood up and looked at his watch. "It's time," he said. "Turn up the resonator." He moved closer to

the receiving set as the others gathered around him. The low hum of the monitor signal became louder as the technician switched on a new lever. The static emerging from the speaker thickened, obliterating all other noises. Another two minutes went by . . .

Crawford watched it all, aware of the tension and anxiety on each face, feeling the throbbing excitement himself. So they stood, tensely expectant, awaiting the return of his voice . . .

Suddenly the technician whispered, "I've got it! It's coming! I hear it returning!" He swung around, offering his earphones to Dr. Shalt, who grabbed for them hurriedly. The scientist raised the cups to his ear and waited. The room fell into deeper silence.

"Yes, yes, it's the voice! Turn up the resonator to full volume! We've got it! The voice is completing the circuit!" Dr. Shalt said tensely.

The technician turned another dial as far as it would go. The sound of the static rose to a roar. Then abruptly the static broke, died out and a strange new sound came in. It was Spud! Spud's voice creeping back from a trip to Mars, thirty-five million miles away!

"Hello . . . This is the voice of Spud O'Malley. I speak to you from Harlow Field in the United States of America. My voice is being sent to you by a newly in-

vented Amplification Unit developed by Dr. Paul Shalt at this experimental base. This is the first time such an operation has ever been tried. We extend our heartiest greetings, our deepest felicitations. . . ."

It went on, the high, squeaking voice, friendly, humorous, alive; sending back to them the words that Crawford had spoken into the microphone a few minutes before.

Crawford studied the faces of the other men. They had worked and planned a long time for this single moment, the realization of a long pursued dream. Colonel Meadows was rubbing his hands together gleefully. The voice was reaching its climax. Success was assured. History had been made!

There was a little silence as Spud finished speaking. The technician reached across leisurely to shut off the resonator.

Suddenly the voice started again. The technician's hand froze in mid-air. The same high, squeaking tone, the same inflections, the same pitch. But this time it was commanding, authoritative.

"This is Mars. We have received your voice. We know of you, know your language. We want you to know that we do not like intruders. We want no contact with you. Seek us out no more. The voice was received clearly. It fits our frequency well. We will keep it so that no more

communication from you is possible. Let this be a warning. Stay away! We do not want you!"

The voice stopped and there was silence again. Then Colonel Meadows chuckled. "Very clever, Crawford! You really startled me for a moment."

"Yes," said Dr. Shalt, smiling. "So you made a little joke at the end. Very clever."

Crawford's back was to them as he stared at the loudspeaker. His face was contorted in a surprised grimace and the flesh was suddenly white and lifeless. He turned to face them, his body rigid and his mouth trembling as he whispered:

"That voice—that last voice—it wasn't mine! That wasn't me speaking!"

Dr. Shalt laughed. "Superb actor. A great performance, Mr. Crawford. We are most grateful to you."

"Robbie's a born comedian," added Colonel Meadows, his eyes sparkling with the humor of the situation. "Never misses a chance to clown."

"Don't you understand—it wasn't my voice!" screamed Crawford. He looked from one man to another, his eyes pleading for belief. "The second part was not mine!"

They stared at him, their smiles fading.

Colonel Meadows said, "What do you mean, Robbie?"

"Didn't you hear when I spoke?

I never said those last things. Didn't you hear what I said?"

The technician answered him. "We didn't hear a thing, Mr. Crawford. The amplification was too high. It was nothing but mumbling when it passed through this room." He looked at Dr. Shalt for confirmation.

"I explained that to you myself," said the Doctor. "You could have recited the Gettysburg Address and we'd never have known until it returned."

Crawford stared down at the limp form of Spud hanging across his arm. He ran a hand across his eyes, dropped the dummy onto the desk. Turning back to Dr. Shalt he began to speak in a taut, controlled voice.

"Dr. Shalt, I swear to you that was not my voice at the end. I finished with a goodbye. The voice that spoke after that moment of silence was somebody else's voice. It's up to you to find out whose."

"Don't be absurd," said Dr. Shalt, irritably. "That was *your* voice, *your* pitch. The voice of your dummy, Spud." He wasn't going to be taken in by any warped sense of humor. Robbie Crawford was the best ventriloquist in America. He was also noted for his practical jokes. "An experiment of this magnitude shouldn't be treated so lightly," he added acidly.

"You've got to believe me!" screamed Crawford. His voice was

choked and his pale face was glistening with perspiration. "It was someone else, imitating my ventriloquist voice! I swear it was not me!"

Colonel Meadows sat down abruptly. The technician ran from the booth and returned a moment later with a glass of water. Colonel Meadows motioned for him to give it to Crawford.

The ventriloquist gulped down the water, then went over and sat down beside the Colonel.

"Look," he said quietly. "I'm not joking and I'm not out of my head. It was a shock to hear a voice so like my own, to hear it threaten us, to know that it's traveling from another world. It's like hearing an echo that shouldn't be."

The Colonel exchanged a puzzled look with Dr. Shalt. After a moment the Doctor reached down and picked the dummy up and brought it to Crawford.

"Crawford, listen to me." His voice was gentle, sympathetic. "Perhaps you've been working too hard. These USO trips, the rehearsal, the excitement of the last hour. Maybe you forgot what you said, or said more than you recall."

"I remember everything I said," Crawford said quietly. "I stopped when you gave me the signal. That voice came after I stopped. Can't you check—?"

A phone in the back of the

control booth rang sharply and Colonel Meadows answered it. He spoke for a few moments, then hung up. "That was the stage manager calling from the main auditorium. You've got ten minutes before the show. How do you feel?"

Crawford blinked in surprise. He had almost forgotten the program. He tried to rise, found his legs trembling.

"He's in no condition to put on a show," said Dr. Shalt. "Better postpone it."

"No, no, I'm okay," protested Crawford, walking around the small floor, exercising his hands. "It's my show. They're waiting for me. Let's get going."

In the car, during the ride to the auditorium, he did not speak. He sat with Spud resting snugly against his chest, drumming his fingers on an arm rest while Colonel Meadows and Dr. Shalt talked, tried to convince him of the invalidity in his reasoning. There was a simple explanation for the voice; either he had forgotten part of his speech or maybe some amateur radio ham had somehow managed to pick up their signal and was playing a joke. He was too intelligent a man to be frightened by such coincidence. They spoke to him reassuringly all during the ride. At the stage door he thanked them, then went inside the auditorium to give his performance.

The ovation that greeted him

was tremendous. The orchestra played his theme and an army announcer introduced him as the Number One ventriloquist in the world. He walked out slowly from the wing, waving and grinning at the audience with Spud sitting erect on his arm.

The soldiers roared and whistled as Spud's head spun, drooped and tilted in the opening routine that he was famous for. Crawford stopped in the middle of the stage, rested his foot on a chair that had been provided, sat Spud on his knee. The applause dwindled gradually and the other members of the cast moved into their positions. The army announcer walked forward to engage Crawford in conversation—to feed him questions that would be answered in Spud's high, squeaky voice.

"Hi, Robbie, Spud," said the announcer. "What took you so long getting here?"

It was Spud's answer. All eyes focused on the dummy's face as it bent forward and its mouth opened slowly. A wooden hand moved up and scratched a wooden head. But only a gurgle came out of the open mouth!

The announcer looked at Crawford, motioned him to speed up. "Speak up, Spud. Can't hear a word you're saying. No time to be bashful."

Again the dummy's mouth opened, the head bobbed and the eyes blinked. The gurgle became

a half-strangled gasp. It whined unsteadily a few moments then broke off completely. The cast in the wings began to stir nervously. Crawford was obviously straining. A vein throbbed in the center of his forehead and his lips were tight over his teeth.

"Stage fright," he said in an aside to the audience. Turning his head aside he coughed and cleared his throat and pretended to whisper with Spud. "Speak up, Pal. This is what we rehearsed for."

The mouth of the dummy flapped up and down without cadence. The soldiers snickered, squirmed restlessly. A sound started, a low, plaintive wail that broke into a dirge and finally into a wild shriek from Crawford's lips. He screamed and kicked over the chair his foot was balanced on. The dummy toppled to the floor.

"I can't! I can't! My voice is gone!" He was screaming and clutching at his throat, trying to loosen his collar. The curtains closed behind him as soldiers leaped to their feet all over the auditorium.

He screamed, "I've lost my second voice! They took it from me! The Martians stole my voice!"

The announcer grabbed his arms then and tried to lead him from the stage. Crawford shoved him away.

"They took it," cried Craw-

ford. "No matter what they tell you the Martians took Spud's voice. It fitted their frequency. They'll use it to reach Earth! I can't get it back!"

Colonel Meadows and several MPs who were stationed in the wings came out and dragged him from the platform.

The G.I. audience remained silent a moment longer, then broke into loud, nervous rumbling. Seconds later Colonel Meadows returned to the microphone and held up his hand until the confusion died down. He explained briefly about Dr. Shalt's experiment and how Crawford had been asked to participate. He told how a human voice had been sent to Mars for the first time and how Crawford had suffered a temporary shock on hearing his voice return from this journey.

He assured the audience that Crawford would receive the best medical care and would probably be back performing at the field in a few short weeks. He asked the soldiers to remain in their seats and let the show continue out of respect for a great performer.

The orchestra began the refrain of a popular song and the guest vocalist appeared wearing a white strapless evening gown. She blew warm, friendly kisses to the soldiers. The response she received was a healthy one.

And the show went on . . .

such blooming talk

by . . . L. Major Reynolds

Henderson's lovely flowers were going to bring him fame—until they walked and talked too much.

THE RINGING of the door bell cut into Henderson's concentration and he made a gesture of irritation with one outflung hand. But he didn't raise his head or shift his eyes one iota from the tiny green thing on his laboratory table. Tensely absorbed, he stood watching the small miracle he had made and emotion approaching exultation gripped him.

He slid one hand toward a switch, never moving his eyes from the table. The infinitesimal movement of his hand increased the power throb in the machine at his side so imperceptibly that only he could be aware of it.

Suddenly his breath exploded in what was almost a squeal of delight.

The small green plant on the table was with great effort extending a pair of tiny rootlets and was trying to use them to walk!

As Henderson watched, spell-bound, the sudden cessation of the doorbell's ring went unnoticed. He stood there, willing with every cell of his body the miracle that would make that small shred of green take the first vital step.

Slowly, slowly it struggled to an upright position, stood waver-

A bit of levity never hurt anyone—even a science fiction editor, writer or reader, we hope. And a laugh has been known to lighten a heavy load and even change the path of history. So—we give you this brief moment with an amazed scientist and his startling creations—for a brief chuckle.

ing. Henderson increased the power with a trembling hand and almost forgot to breathe as he waited for the miracle which followed.

Several more rootlets abruptly appeared, and now the plant balanced itself easily on the bare table. Then slowly, as a long minute passed, one of the roots made an uncertain step, then another and another, until it was walking unsteadily across the surface of the table!

Henderson, his face—even his lips—white with excitement, now reached for another switch. Before turning it on he adjusted a tiny microphone on the edge of the table. Then he turned the screw switch . . .

Instantaneously the laboratory was filled with a rustling. Then there came a series of tiny squeaks that sounded strangely like a voice speaking. Henderson sat spellbound, watching, listening . . .

The door bell rang again, but this time he didn't even hear it. Nothing could break the spell which held him in his seat before the first talking and walking plant the world had ever known.

He picked up an alternate phase microphone and spoke into it. His voice issued from a tiny speaker beside the plant as a small whisper of itself.

“Man!” his voice whispered, “Man!” He nearly yelled his delight as the small green thing echoed the word!

He shut off the mike, then, and got busy. He sat down and began to plan a vocabulary to educate his plant. When that was done he would stun the world with a demonstration of his genius . . .

It was some time before he realized there was a ghost of a voice coming from someplace in the room. He looked at the plant on the table, but it was standing quiescent.

Henderson stared around the laboratory, frowning. Then a movement at the window caught his eye.

His mother's prize geranium was struggling to free itself from the soil in the window box! And it was muttering! Henderson blushed as he made out some of the words the flower was muttering. That plant had been in the room with him during some of his most dismal scientific failures, and it evidently had a good memory. He watched wild-eyed as the plant struggled to lift its roots from the earth . . .

One root finally came loose with an audible POP, accompanied by a squeaking streak of profanity. Another and another root worked free, and suddenly the geranium was standing on the edge of the box. Its bright red blossom turned from side to side. There was no eyes visible but Henderson had the chilly feeling that the flower was surveying the room. Then, after a moment, the plant jumped to the sill of the

window, from there to the seat of a chair. Then it slid down one of the legs of the chair to the floor.

It shook its leaves, lifted its blossom upward at the amazed Henderson frozen in his chair, and the tiny squeaking voice said cheerily, "Hi Pal!" Then it started walking across the floor, toward the door, muttering, "Somebody's got to answer that damned door bell."

Henderson's legs came unfroze as it went through the doorway and he made a wild dash after the walking geranium. It was padding down the hall, its roots making little patting sounds on

the linoleum as he passed it.

Henderson opened the door, and only then did he begin to realize the scope his rays must have!

He stood, jaws agape, looking down at the rose-bush which stood outside the door. His mouth opened and words tried to come out. But the bush spoke first.

"I've been ringing this bell for hours," it said petulantly. "Some nasty boys have been picking my roses and I'm getting sore!"

Henderson fainted then, and the last thing he remembered was the voice of the geranium saying:

"Hi Babe, come on in. I been watching you for a long time!"

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FU



cogito,

ergo

sum

by . . . John Foster West

A warped instant in Space—and two egos are separated from their bodies and lost in a lonely abyss.

I THINK, therefore I am. That was the first thought I had. Of course not in the same symbols, but with the same meaning.

I awakened, or came alive, or came into existence suddenly, at least my mental consciousness did. "Here am I," I thought, "but what am I, why am I, where am I?"

I had nothing to work with except pure reason. I was *there* because I was not somewhere else. I was certain I was *there* and that was the extent of my knowledge at the moment.

I looked about me—no, I *reasoned* about me. I was surrounded by nothingness, by black nothingness, a vacuum. Immense distances away I could detect light; or rather, I could perceive waves of force passing around me which originated at points vast distances away, vast in relation to my position in the nothingness.

There were waves of force all about me, varying in frequency. The nothingness was alive with waves of force, traveling parallel and tangential to each other without seeming to interfere one with another. I measured them, dif-

Are the Spirit and the Flesh one and the same thing? Or are they separate entities, dependent and at the same time independent of each other? Perhaps some great Cosmic Law holds this secret. But the one Universal Element that we can depend upon, apparently, is The Lucky Accident.

ferentiated between them and finished with the task in a matter of seconds.

How could I do it? It was one of the capabilities I was *created* with.

What was I? I perceived the waves of force. I perceived great quantities of mass—solid, liquid, gas—whirling in vacuum, mass built up out of patterns of basic force. I searched my own being, analyzed myself. I was not gas. I was not solid. I was not even force. Yet I existed. I could reason. I was a beginning, a sudden beginning. And I had duration because I knew that time had elapsed since the moment I *awakened* though I had no means of telling how much time or of even naming the period.

Could I really be *pure reason*? Can reason exist? Can rational entity exist without a groundwork of matter, or at least of force?

It could. It must. I was rational entity and I existed. Yet I could find nothing of force, nothing to occupy space about my *self*. For all I could ascertain, I might have covered a one-dimensional point in eternity or I might have been spread throughout vast distances.

From this reasoning I concluded that rational entity might occur either as some force unlike that of all natural phenomena in space, or as some combination of these forces at the moment beyond my own power to analyze,

even detect. I finished with that for the time being.

How did I come into being? I discarded the question as unanswerable temporarily. What was I before that instant I suddenly reasoned *cogito, ergo sum*? I could not say.

How did I know I even existed, really? Obviously because I was capable of rational thought. But what was thinking? First it was perceiving and accepting my own existence; beyond that, it was recognizing the dark nothingness around me and the forces it contained. I had to exist.

But how did I know nothingness was right? And how did I know its darkness was right? And how did I know the waves of force were *waves* and *force*? And how did I know matter was *matter* and that I was none of these?

"Symbols," I reasoned. "I'm thinking in symbols. I could not reason without symbols; therefore I could not exist as I am without symbols to think with."

Yet whose symbols were they? Where and how did I come by them? I could think back clearly to the instant of my creation, yet I had not invented the symbols in the interim of my existence, nor had they been given to me. What then? They were part of me when I came alive in this universe, had been *invented* some other time and elsewhere by someone else or by what I was before I became the entity of reason I now was.

Then that first flash of perception in nothingness was not spontaneous. There was something behind it. I was something before that moment, in another era of time; perhaps a creature of substance. But what?

I concentrated. I remembered the symbol *Marl*. I was or had been an entity *Marl*. Were there others back there, somewhere? There must have been, must be yet. Was I the only *Marl* who metamorphosed into this state of rational entity? Surely not. Yet I could contact no other rationale around me as far away as I could probe. How far was that? How could I know. Was it far enough to reach the other *Marls*, or were they scattered thinly throughout infinity around me like the flecks of mass?

I was suddenly ill. The symbol *malaise* came to me as the proper description of my malady. I grew dizzy with my sickness. I wished to regurgitate, to cast off this cold, frightening sensation. Yet I was provided with no physical means of doing it. It filled me throughout all my thinking. It was I. I thought to exist. I thought depression, sickness. Therefore I was the malady and it was a hell of malcontent beyond symbolical description.

What was wrong with me? I was frightened. I was concerned for my existence here alone. What was it called? The idea shimmered there on the fringe of per-

ception, then fairly leaped into my consciousness. Existing alone as pure reason was worse than no-existence, was worse than dying or never having been at all. I need another *Marl*. To exist happily, I must have at least one other *Marl* to communicate with, to share my thoughts, to share my being.

Is this a necessity, a condition peculiar to me as I am, as reason, or is it a condition that came across the barrier with me from that other state? It must be the latter. An entity of pure reason, having come into existence as reason, would need nothing but himself. Why? Because he would be *without emotion*.

"I am *emotional*," I thought. I am entity of almost pure reason, but I have inherited emotion from my previous state. It is a disorder of thought, but it can be a pleasant disorder when the emotion is the right one; or, if unpleasant, when satisfied.

"But I could not have emotions as I am now. They are *cortical responses*, or are supposed to be. What is *cortical*? No, they are a sort of illogical reasoning, nothing physical—" The rest eluded me.

"I am lonely," I thought. "Loneliness stems from fear and fear is a basic emotion. I am very lonely. I have been lonely for a long time, bringing it with me here. I would rather sate my loneliness than live to eternity, than know all there is to know. What

can quell my loneliness? Another like me, another *Marl*—whatever a *Marl* is. I must have, must find another *Marl*.

I began to search. I darted frantically about space like a frightened thing, though I could perceive no movement. I knew I passed from one area of space to another because I could measure slight changes in the position of the stars about me. I knew the points of light were *stars*.

There was duration. I could not know how much. Eternity? A split second? But at last I discovered another like me. No, almost like me, but another *Marl*. The other entity had less of reason, more emotion. It was frightened and lonely. The *Marl's* whole existence was that of sickness—of loneliness, which is fear. The *Marl* was darting about madly, seeking, seeking a thing like itself. What was it, like me but different?

As I came in, I measured our similarity and differences. Rationally we were identical, or almost so. Emotionally we were different, vastly different. "*Marls* appear to exist as rationale and emotion," I reasoned. "Beyond that I cannot go."

The other *Marl* perceived me, darted frantically toward me, then slowed. We came together, touched like—like two cautious fish meeting in a dark pool and touching mouths to substantiate identical species.

The other *Marl* was satisfied with my identity. It leaped frantically at me, raced around me, through me, finally stopped, pervading me, while *vibrating* in sheer relief and happiness. I felt the great fear-loneliness in the other *Marl* begin to recede and in its place came an almost overpowering euphoria. It was *contentment*, and it stemmed from the basic emotion *love*. I knew this at once.

I suddenly realized that I too was relieved, that I was no longer sick with fear-loneliness. It was good, this existing of the other within me or simultaneously with me. Or was it I within the other? It sated our fear emotion and made, created a love-euphoria.

"I am happy I found you," I communicated. "I was lonely for another *Marl*. You are a *Marl*?"

The other hesitated, thinking. "No. I am *Pat*. I am different from you. But it is chiefly emotional. It is good."

"You are a *Pat*," I returned in disappointment. "I had hoped to find another *Marl*."

"Don't be disappointed," the *Pat* soothed. "We are alike, really. Almost so. Like—like flame and gas are both substance yet different. We are two types of the same thing. I am no longer frightened. I am no longer lonely. You are good for me."

I was relieved because I wanted to be. I believed the other *Marl*—no, the *Pat*—because I wanted

to believe. I did not bother to rationalize. I felt elation.

"Then in that other time, that other place we both belonged to a —a common group, with another name?" I suggested.

"I believe so," the *Pat* answered.

"How was it when you came awake?" I asked. "Can you remember?"

"I think so. I recall I was born here in fright because it was all wrong. I was not in my natural state, so it was not right." The *Pat* paused to think. "I remember there was great speed and I was born in fright. Were you?"

"No," I answered. "I was not frightened at first. And I was never frightened to the degree you were. I was mostly lonely, which is related to fear. But when I first conceived of my existence here I was coolly logical. I awakened *reasoning*—realizing that I existed."

"I suppose it has to do with our emotional differences," the *Pat* beside me or with me or within me communicated.

"Do you recall where in space you came from?" I asked. "I must have been doubting my existence at first so intensely I did not observe. You seem to have taken your own being for granted, thus you were, perhaps, more observant."

"I—I think so." The *Pat* hesitated and I knew it was observing the stars around us. "Yes. Come

with me. I think I know where."

I stayed with the *Pat*, a part of it, and we lurched through space. Rather, we ceased to exist at one point in space and existed in another. How far? Distances meant nothing.

"It was here," the *Pat* informed me finally.

Something was wrong here. The interweaving waves of force were all wrong. There was a disorder, a great cancer in space. The waves interfered with the progress of each other all along a great barrier. It was not natural, not like it was elsewhere.

"Something is wrong with the waves of force crossing this area. They interfere with each other. New forces are created. Do you detect it?" I communicated.

"I feel it," the *Pat* answered. "It is a sickness in space like—like our loneliness."

I knew the comparison was ridiculous but I let it pass. "You said you came alive at great speed. I could have been traveling too. We must have plunged into this barrier. It seems to me that emotions must originate in a *physical* being; perhaps reason could be free, but not emotion. I don't know. But I have a theory. I believe our *physical* selves still exist somewhere in space. The barrier, perhaps, interfered with the normal functioning of our mental equipment. We exist at one point in space

and we are thinking, experiencing emotions at another point. It's as if our minds are—are broadcasting our thoughts and emotions far away from our physical selves. Either that, or our rationales were torn free and only our emotions are broadcast. Does that sound logical?"

"Yes," the *Pat* agreed, "I believe that is the answer."

I felt that the *Pat* was pleased with my theory, that it greatly admired my reasoning. I also perceived that it had no idea what I meant by the explanation. I did not mind.

"You said you were moving at great speed," I continued. "Can you remember the line, the direction you were traveling in?"

The *Pat* hesitated only a moment. "Yes. You perceive the star cluster there, the triangular one? My heading was in that direction, but it was changing fast."

"Then we could find nothing by traveling toward the triangular cluster?"

"No. I was moving in an arc in the direction of the distorted square cluster there. Do you see it?"

"Yes," I answered, knowing her use of the word *see* was unconscious. "That is Cetus."

"Cetus?" The *Pat* was startled. "How do you know that?"

"I don't know. The name came to me. It seemed right to call it that."

"It—it's all so frightening!"

I had no time for pampering our emotions, though I was at great peace with the *Pat* so near me. Time might prove vital. "Neither would it do any good to travel in the direction of Cetus," I said.

"No. No," the *Pat* communicated. "If there is any object of matter or force I was a part of in that other existence traveling through space, it is in an arc. The best we can do is take an arbitrary direction between the triangular cluster and the one called Cetus and hope to intercept the object, the other part of me, whatever it is."

"Come with me," I ordered.

I discovered the object of mass hurtling through space before the *Pat* did. It was symmetrical and metallic. I tore myself away from my companion and darted to meet it. I discovered it was a shell, a hollow thing, and I passed inside. There was a room there. There were projections and circles of transparent matter. I experienced the symbol *dials*.

There were two other creatures seated close to the dials, things of matter, and their substance was protoplasm. But there was no rationale present in either of them. I examined the living matter of the smaller one swiftly. Organs seemed poised in a suspended state. The creature I observed, housed in a protective shell, seemed paralyzed or dead. I re-

membered the word *dead*.

Then the *Pat* was with me again. "I—I feel something, *Marl*. I am frightened. What are they, those things there?"

"They seem to be—" I stopped communicating.

The *Pat* had disappeared!

The thing of protoplasm nearest me was moving but I was no longer interested. I remember the *Pat* had touched the upper extremity of the creature and had vanished, had ceased to be.

The old sickness was back. I was lonely. I wanted the other entity. I could not, did not wish to exist without the *Pat*.

I darted frantically about the metal shell, here and there, searching, searching. Where was the *Pat*? I screamed for it. I thought *Pat* as far away as I could reach, but there was no reaction, no response at all.

In my frenzy, I was back beside the creatures of protoplasm before I realized it, near the one I had not yet examined.

"Perhaps they took her," I thought. It was not logical, but it was a hope. Hope is emotional; I was becoming more emotional than rational.

I touched the larger of the two creatures, experimentally; moved cautiously inside it, searching, searching.

Suddenly I was seized by a great force, an inexorable power that grasped me and wrenched me, tearing me from the point in

space I had occupied a moment before. My perception blurred, but I was not frightened. Without the *Pat* I did not care what happened. I was intensely curious. "So this is how it is," I reasoned in a flash, "to cease to be."

And I ceased to be . . .

Marlow shook his head. I must have dozed, he thought. He glanced at the chronometer on the console ahead. No, only a minute or two had elapsed since the last time he had checked.

"Sleepy head! Wake up and live!"

He looked to his right. Pat sat in the navigator's seat smiling at him.

"I didn't sleep, honestly," he protested. "We hit some sort of barrier back there. It knocked me out for a moment. I had the damnedest impression—"

"Remember what you promised!" She swiveled the seat about to face him. "No more scientific lectures on the mysteries of space or I'll return to earth. You know my poor brain can't absorb it."

"You win," he grinned, running calloused fingers through his greying crew-cut. He leaned forward and kissed her briefly. "How did an old space hermit like me ever win a flower-garden bride in the first place?"

They laughed together, and he felt secure within the metallic shell surrounding them, no longer alone.

the deckplate blues

by . . . Algis Budrys

In the fin-tip of a space giant one man learns a strange lesson about Mankind as his pioneer thirst sends him out on a dangerous mission.

DUSTIN HUNG in his little transparent bubble of a turret at the fintip of the mother ship, a man in the sky, alone. The crib-mounted Kesley was company of a sort, demanding courtesy and attention, but the nearest other man was some two hundred meters back up the fin.

The fin man was jacketed in *his* cocoon, with the broad-shouldered breech of *his* Kesley crowding against his vision. But Dustin was farthest out on the fin so he was the most alone.

With his legs thrust into the stirrups that extended down below and between the coiled ignition leads, the feed lines, the blowbacks, just a few centimeters short of the crib tracks and a handsbreadth forward of the compensator gears, Dustin's body bent forward a trifle to fit the turret's curve. With straps across his chest and around his shoulders, with his throat lightly choked by his microphone and his ears gently touched by the inwalls of his helmet, with his wrist-braced hands lying just beside the turret controls, he had nothing to do but hang in the

Have you ever wondered about why today's young pioneers of Space—the only frontier left to modern Man—appear to be such dedicated men? And why their zest for life ebbs when the "old age" of their late twenties takes them out of the high-flying, fast-moving Ships of the Future? In this moving saga of a young-old skyman Algis Budrys tells their secret.

sky and watch the stars of hyperspace halating all around him. And to listen to his thoughts as much as he wished, so long as neither the watching nor the listening were of such intensity that he would fail to hear the scream of the turret alarm and slash his glance at the gunlayer controls in time to live—thus preserving the ship as long as possible.

Most of the time Dustin sang to himself as he sat there waiting, silent words and melody echoing in his mind:

"Brasswork's dirty," the Cap'n said.

"Go clean it up." Wish he was dead.

I got blues. Brasswork blues.

The song was something the Merchant Service had given him, from before the TSN changed its eligibility qualifications. Now he hung in his turret, isolated on a ship with three thousand men for crew, alone. And the pain in his throat was a thin, foggy nagging which disappeared when even the slightest other thing caught his attention. He sang the Deckplate Blues in his mind, to forget the pain in his throat.

"Deck's all slick," the Mate he said.

"Go wipe it off." Wish he was dead.

I got blues. Deckplate blues.

His glance sought the repeater

dial of the ship's chronometer . . . Three hours left in his five-hour GST watch. Twenty minutes before the watch ended the mother ship would sideslip back into Space Prime and, possibly, into action. Then there might be a change of watch, but probably not. It took too long for men to switch places in and out of a turret.

The new *Erie* Class ships had solid turrets, with the leads and blowbacks buried in the walls and screens instead of the transparency of the bubbles on the *Chesapeake* ships that made up the tangle that filled the turret and made it almost impossible to crawl out in less than three minutes.

But there were only four of the *Erie* ships so far and he'd probably never crew one in any case. The best ships and the best men went together. That meant he belonged on the *Baltimore*, protecting her flank with his Kesley while she swung around the periphery of Sector Red and tried to sow her little interceptors where they would harass the Eglin fleet that anchored the enemy half of Red.

But his importance to the ship and the ship's importance to the TSN were things which he had long ago weighed, decided on, and forgotten.

He had three hours of duty left and all the TSN expected of him was the same thing it ex-

pected of the ship—the best of which he was capable, and let BUSPAC do the weighing. So, with three more lonely hours to fill he sang silently:

*Took in a rock, passin'
Altair—*

*Bust up the hull, ruin the
air.*

*I got blues. Spacesuit
blues.*

He'd heard the song first at Flushing. Then through the years, each marked off by a voyage to a star, flaming and planet-wrapped, he had heard it with its countless verses. And as the Length of Service chart on his ticket grew fuller, he had sung it:

*Now the Mate's real sick,
And the Cap'n's dead—
But me in the spacesuit,
scrubbin' the Head,*

*Surrounded by acres, and
acres, and acres—*

*Fouled up in acres of
steel.*

The song grew out of the loneliness and, at the same time, it filled the loneliness.

He was older than the other enlisted men in the crew, with the exception of a few Chiefs. Not much older—war in space is a young man's game—but the difference pushed him across the line that separated boys from men. And the song marked another difference—it was part of his life in the Merchant Service, something that had fitted itself to

him through the years in a way of living that the other space men on this ship had not experienced.

The crewmen who shared watches with him had heard him sing the song, but the grins on their faces when he finished that last verse had shown they hadn't understood its meaning at all.

So they called him Deckplate Dustin because of the song, or Old Deckplate. They grinned at him when he forgot and sang aloud as he sat by himself in the turret. They weren't derisive about it—they merely acknowledged the difference, and respected it.

Most of them had never been this far from Flushing before, while he had actually twice ridden a ship into Eglis itself, before the war. He knew they envied him for it. And he envied them their careers in the clean, leaping TSN ships, driving out into the universe with the finest equipment man could provide, touching new worlds while they were still fresh and wonderful, not yet overlaid with transplanted culture that greeted the first of the Merchant Service ships.

It was the longing to see those new worlds in their untouched state that had caused him to leave his Merchant Service berth when the TSN restrictions had been modified, and join a space ship crew. The war had changed things and a man with a slightly

unbalanced metabolism was a good enough risk for service in ships that might never come back. So they had taken him on six months ago, and made him a fin man.

He glanced at the chronometer again. Two hours and fifty-five minutes left. He began a new set of verses:

"Paint's all burned," the Cap'n said.

"Freshen it up." Wish he was dead.

I got blues. Hullwork blues.

If Space Prime is a barrel floating down a river at night, then hyperspace is the river. A ship punching through out of the barrel can never be sure of where in the river it would emerge, or how fast the current was running. It could only operate in relation to the barrel, riding the swifter current of hyperspace, then punching back into the barrel, knowing where it had come from and where it was going, but never finding out where it had been while it was in the river.

So what happened now was coincidence, one of the infrequent accidents that were slowly increasing in number as more and more ships on either side of the war broke out of the barrel and into the ebon swirling river.

The Eglin ships floundered into hyperspace fifty thousand miles away. Even as the *Baltimore* resonated to the beating of her

alarms, the Eglin ships—four of them—fanned out after the first astonished moment of mutual discovery.

Dustin's gunlayer had already trained the turret's Kesley on the most significant mass within its detection range. Now Dustin's corded fingers slapped down and overrode the gun's impulse to fire, for the detectors, of course, had behaved as detectors will at extreme range, indicated a resultant obtained from the four separate bodies of the Eglin ships rather than pointing at any one of the shimmering hulls—hulls which were halating so badly that they were as visible as planets at that distance.

The four enemy ships were roughly equivalent to *Anzio* class destroyers, Dustin thought as he read the dials on the gunlayer. That meant they would stand no chance against the *Baltimore* in a gunnery duel. And no chance of any kind once the mother ship's interceptors were spaceborne. The attack had to be swift, had to come from several directions at once, had to be as vicious as possible, for it could not be repeated. It had to come now . . .

Dustin slid his feet restlessly in the stirrups, felt the tip of his tongue curl back and press against the roof of his mouth.

The four ships had been moving apart as they came toward the *Baltimore*. Now they snapped into courses that converged on

the TSN ship, three of them suddenly disappearing from Dustin's sight while the fourth came on, was now almost directly above. Even his gunlayer ignored that one for the batteries on the hull would handle that problem decisively.

One of the other ships now arched up into his sight, coming from behind the *Baltimore*'s hull. The turret rocked a bit on its compensators as his Kesley rolled over in its crib to follow the Eglin. Dustin gave the gunlayer its head, his torso straining against the saddle straps as the Kesley swung. He estimated his chances of hitting the Eglin, knew they were very good, and left the gunnery to the machines.

More than likely, he knew, a similar attack was being made on the other side of the hull, and with similar results. He wondered briefly if the fourth ship was attacking from below.

As his Kesley fired and the Eglin ship broke into wildly fluorescing particles before his eyes, he saw the fourth ship slash across the *Baltimore*'s bow, spew torpedoes and vanish. Aboard that ship, he knew, generators were fusing and men were dying, but what mattered was that the Eglin had succeeded in shifting back into Space Prime without adequate regeneration of his field, for had the one-in-four chance taken effect, all of space would have blossomed open in

front of the surging mother ship as the Eglin detonated.

And even as he recognized the long-range failure of the mother ship's mission in the warning that the Eglin now carried back to his fleet, the more immediate danger overtook him.

The other two Eglin ships had long ago been reduced to pieces. Now the light automatics that studded the *Baltimore*'s body were twinkling with fire as they picked off the tumbling torpedoes the fourth ship had sown. Dustin watched the rippling surge ebb and flow as it wreathed the grey hull, and had no warning until the Kesley suddenly reared in its crib that one of the missiles was actually close enough for its mass to activate the gunlayer. He rocked in the saddle, trying to find the torpedo with his darting eyes, but failed to see it because of the hulking Kesley's breech.

Had it not been for the interruptor circuits the Kesley would have fired and hulled the *Baltimore* even as it destroyed the torpedo. As it was, the missile punched through the fin some hundred and twenty meters away from the tip, exited into space again, then exploded its charge.

Now Dustin was even more alone in the sky, for the explosion severed the access tunnel, cut the interphone lines, and left him and the turret clinging to the main body of the ship by the warped

central spar and such lacerated stanchions and plates as still formed a pitifully slender bridge between the remaining two-hundred-and-fifty meters of fin and the askew section at whose tip he was.

Twenty minutes later a coded message began to wink at Dustin from the signal gun in Number Three turret. He read it easily, took his own gun from the rack behind his head and signalled back:

Am uninjured. Turret operative.

There was a pause, then the signals flashed again from Number Three turret.

Maintain station. Repairs commencing. Relief soon as possible.

Ack and out, Dustin acknowledged, and racked the gun. He nodded to himself, agreeing with his orders.

The turret was a self-contained unit with its own powerplant. Theoretically it could operate without direct connection to the rest of the ship for an indefinite period of time. Actually, this was true only so long as he, the fin man, could hold out. And there were no rations in the turret and only a small tank of water. But, if necessary his relief could come up over the undamaged section of the fin in a spacesuit, entering the access tunnel at the break, or even coming all of the distance on the skin.

Under normal conditions the turret would probably have been left unmanned until the fin was repaired. But with the ship at Action Stations, and the almost certainty that the Eglin fleet had an excellent idea of the *Baltimore's* location, the mother ship's staff could not take such a chance. A turret on full auto was as likely to expend itself on a resultant or an already neutralized target as not.

Frowning, Dustin planned his course of action in event of another attack. As long as his blowbacks were clear, the firing of the Kesley would put no additional strain on the weakened spar. If another hit were to jam the blowbacks, however, his next shot would snap the end of the fin off with its recoil.

It was at this point that he discovered that the turret escape hatch had been jammed by the explosion.

His jaw tightened but his lips stretched into a grin as it did so. He strained one shoulder against its strap in a half-shrug . . . Very few men ever made it through an escape hatch anyway. Of those who did, even fewer were ever picked up, and then usually only in fleet actions where torpedo and picket boats were numerous enough to make the chances of contact likely. He could not imagine the *Baltimore's* captain detaching any of his interceptors

in the middle of a battle to follow a single man down . . .

The grin widened as he realized something else. With the interphone lines cut it didn't matter now if he sang aloud. So he added a new verse to the Deckplate Blues, singing aloud:

*"Stay where you are,"
says Cap'n dear.*

*Wish I was him, and he
was here.*

*I got blues. Strategic
blues.*

He did not consider the jammed hatch as being of sufficient importance to require a report. If Number Three turret signalled him again he'd mention it then. With that thought disposed of he went back to his lonely thoughts while the *Baltimore* plunged on through hyperspace at undiminished speed, and the gunlayer's detectors combed the sky.

Apparently the BUSPAC tests were more effective than the average TSN man would admit, Dustin thought as he rode among the stars in his transparent turret. They'd shown him up as a man so used to loneliness that he could be assigned to a fintip turret, with the ship itself almost a fifth of a mile away and nothing for company except the stars—frozen-fire cold in Space Prime, violet-haloed in hyperspace.

Or had they dug deeper than that and found the source of his

loneliness? Had the tests and the IBM cards found the boy who was born three blocks away from Flushing airport, who had ridden the big ships in his mind long before his feet had ever touched the metal of a deck?

And had the tests uncovered, in a half-day, what it had taken him ten years to find out for himself—that only the first few pioneers see the stars as they really are, and that these few carry the tainted seed of longing with them forevermore? The longing to be always first—always there where man has not yet touched.

What makes a man go into space if it is not a hunger for something that man has not touched? And what does a man feel when he finally discovers that only the first few ever outrace the tide which they themselves bring with them? And if a man wants to leave Earth behind, then he is lonely among all things which are of Earth . . .

Had Dustin been a rich man he would have bought his own ship and driven deep into the unknown sky. Had he been a scientist a grant would have given him the ship. Had he been older he would have been Captain of a ship, and that would have done as well—if he could have gone without a crew.

But he was neither rich, nor a scientist, nor a captain . . . He was simply lonely.

The TSN, wittingly or otherwise, had done the best it could for him. BUSPAC could not trust him with a ship of his own, for even a torpedo boat's destiny cannot be entrusted to a man whose glandular chemistry might never allow him to complete his mission. So they had put him on the fintip of a *Chesapeake* class mother ship, and Dustin was grateful for the loneliness they had given him.

The chronometer repeater had cut out with the severance of the line into the ship. But Dustin guessed that the ship was near its sideslip point, and the signal gun that winked now from Number Three bore him out:

Sideslip now plus five.

Battle stations.

Dustin grinned as he acknowledged. Actually, the Captain could have ordered the message spelled out in a letter code, in which case the phrase would probably have read *Be on the alert*. But the familiar *red-red-red* of Battle Stations was just as good.

But the significance of the phrase was not lost on him. It indicated that the *Baltimore* was proceeding according to plan, despite the fact that the Eglin fleet must have been warned and would probably be waiting for the mother ship to break into Space Prime.

He let the Kesley roam in its crib, covering an almost perfect

sphere of space, restricted only by the interruptor circuits which kept it from firing whenever its range impinged on any part of the ship, and by the thin wedge of fin into which the turret was mounted. As he had expected, even the most violent movement of the massive weapon, when damped by the turret compensators, imposed no strain on the damaged fin. But if the ship made any violent maneuvers in battle, the turret's inertia would easily snap it free, carrying the fin down to the gap away with it. Once again the tension hit his shoulders. But the grin did not leave his lips . . .

The men who had been working on the torn fin disappeared and Dustin saw the hatches retracting away from over the wells in which the interceptors were berthed. A group of test missiles for the automatics showered out to all sides of the ship, cut off their recog fields, and were speared out of existence by the rippling fire from along the hull.

When the *Baltimore* slipped into Space Prime the Eglin fleet was waiting for it. Fire from a battleship hit along the TSN ship's port bow and a pack of destroyers moved in, weaving a pattern which was intended to furnish the Kesley gunlayers with only resultants to fire at.

Dustin's lips tightened. That tactic was the reason why turrets carried gunners. He cancelled

out the gunlayer's attempts to fire into empty space, threw in the best-of-three circuits, and saw the stars spin as the gunlayer, forced to find a target under specified conditions, rolled the Kesley and snapped test bursts at a resultant and two other readings at equal distances from it. Where a destroyer had been the gunlayer now read diminished mass. He fired again, this time decisively.

The interceptors broke away from the *Baltimore*'s hull and began picking their targets. But their entire purpose was being destroyed even as they fulfilled it.

The *Baltimore* was being hit repeatedly. Dustin saw a string of torpedoes break through the hedge of fire from the automatics and explode inside the hull, blacking out all the starboard automatics, blowing out a hull turret, and smashing one of the retracted hatches over the interceptor bays.

The only reason that the TSN ship was not pounded to pieces immediately was because the Eglin fleet knew only that the mother ship would emerge in Space Prime, but had not been able to cup a specific position.

Now the *Baltimore* was being engaged by a battleship and a destroyer squadron. Dustin could see cruisers and an Eglin mother ship bearing down on them, and a group of torpedo boats swinging in on the TSN ship's far side,

while interceptors from the Eglin ship were forming attack flights and pouncing on the TSN interceptors.

He let the gunlayer go back to full automatic as the Eglin ships swarmed in closer. The Kesley was firing almost constantly into a haze of mass-readings that half-blinded the gunlayer and cut the percentage of hits to a figure lower than anything Dustin had ever heard of. But best-of-three gunnery was far too slow at *this* range, and anything was better than full manual.

His mouth was full of ashes. In another moment the *Baltimore* would either have to jump back into hyperspace, depending on its big generators to stand the strain of a sudden surge in the field, or it would have to swing ship. If it did the latter, it might be possible to disengage the Eglin ships temporarily as their own inertia carried them past the mother ship. But the turret would never make the swing with the rest of the ship.

He analyzed the situation as best he could . . . If the *Baltimore* swung, she might be able to beat off the lighter Eglin ships in a running fight, leaving the slower battleship behind. But the cruisers and the enemy mother ship would eventually catch her. And the end result would be that the Eglin fleet would suffer no significant losses.

On the other hand, if the

Baltimore went back into hyperspace it was entirely possible that she might escape to return at a later date, or, at least get back to a TSN base. With the fighting going on at its present pace, none of the lighter Eglin ships could hope to devote their generators to a sideslip. By the time they did, the TSN ship would be far enough away to be safe.

The flaw in the latter course was that the battleship and the mother ship certainly could, and would, follow the *Baltimore*. Even some of the cruisers might try it. And seventy-five percent of those that did try would succeed.

The TSN interceptors were being slaughtered as they tried to break through to the Eglin battleship. A few of them did succeed in penetrating the outer barrage of fire laid down by the big ship's turrets. But the tiny bombs which the Eglin used against the TSN's automatics caught them all before any serious damage was effected on the Eglin vessel.

The *Baltimore* took another hit forward. It opened her bow and Dustin saw men and equipment cascading out of the gapping wound.

Now he knew the *Baltimore* would not swing. Her forward steering assembly had been carried away by that hit. The mother ship would have to try and make hyperspace, taking her

chances with the two big Eglin ships.

Dustin did something then that no gunner in his right mind ever did. He ripped the safety cover off the Kesley's access and inspection panel, found the proper wires with his groping fingers and tore them out of their connections. He probed further and inactivated the gunlayer. There was nothing he could do about the interruptor circuits. They were printed into the firing mechanism itself. Mutiny was always a consideration in naval architecture.

Then he lined the Kesley up manually, fired at the shadowy bulk of a cruiser that was drilling in on his flank.

The recoil of the big Kesley slammed against the crib. The turret compensators took all they could and transmitted the shock to the fin itself. The vibration pounded down the fin until it came to the gap the first torpedo had torn, and to the slender metal thread that bridged the gap.

The fin-end peeled away from the remaining stub, carrying the turret with it. And as it floundered through space the *Baltimore* ran away from it. Even with a sound fin, a turret gun with its blowbacks inactivated had been known to tear its turret free.

Dustin choked on a cough as he cleared the blood out of his

mouth. The stars were dipping and looping in almost solid streamers as the turret and fin-end tumbled through the sky like a blown leaf, still holding to the *Baltimore's* course but fluttering erratically with the motion it had acquired from the recoil and the subsequent reaction against the ship as the fin tore free.

Dustin's fingers began to fly over the Kesley's controls. The gun rolled along its axis as rapidly as the drivers could spin it, and the turret gradually built up a stable rotational axis, turning in the opposite direction. It was the far lighter carriage, spinning within the crib, that was responsible for the gyroscopic action, rather than the weight of the gun itself. The gun would do its part later.

He spun the carriage in the opposite direction, waiting until the turret's motion around the axis of the gun had stopped. He got a glimpse of the *Baltimore*, then found the Eglin battleship. He aimed the Kesley hard, ignoring the reaction on the part of the turret and fin-end, and fired.

The turret skidded around at right angles to its previous rotational axis. The battleship and the *Baltimore* vanished from Dustin's sight, then reappeared as the turret continued to spin, disappeared once more. He tracked the gun as far to the left as possible, hoping that the interruptor circuits—not knowing

that the ship they guarded was no longer there—would not find part of the phantom in the Kesley's line of fire. He punched the firing stud and felt the turret slew around. It drifted slowly clockwise, almost all its motion around the turret axes negated, still traveling along the *Baltimore's* course at a fraction of the mother ship's speed.

The signal gun winked from Number Three turret, still on the stub that projected from the receding ship. He grinned as he read the message:

Deckplate! What are you doing?

Morgan, locked in his own turret was flickering the letter code out into space as fast as his finger could trip the stud. Dustin grinned, yanked his own gun out of the rack, sent back:

Don't stay to see the fun. It's beddy-bye for you. Go to sleep in the deep.

He racked the gun with a chuckle, and almost as if that last message had gone to the *Baltimore's* staff instead of to the gunner, the TSN ship winked out of Space Prime.

Dustin's breath came through his nose, now, and he was feeling the fire in his chest where not even the harness had been able to keep his ribs from breaking under the impact of those three uncushioned shocks.

The Eglin battleship lay dead ahead of him now. He trained

the Kesley on its stern steering assembly, knowing there would be only one shot before he would have to repeat all the wild maneuvers of the last two minutes—knowing that even if the Eglin gave him that time, the target would no longer be there for the battleship would have followed the *Baltimore* into hyperspace. Then, aided by the enemy mother ship, would tear the slashed TSN ship to shreds.

But here he was, one man alone in the sky, navigating his

own ship, with only enemies around him. For this was Eglin sky. No touch of Earth lay across it now, and no other Earthman stood beside him to block his view of the stars.

He fired and the stern assembly of the Eglin battleship vanished. A charging destroyer detonated the turret's power pile at the same instant . . .

But no man has ever again served on a TSN ship without learning—and singing—the Deckplate Blues.

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FU

the
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by . . . Edward S. Staub
and John Victor Peterson

A pstrange probing mind that crossed pstate lines, the pseas, even high in the psky—to bring psomething new to Wall Pstreet.

HE HAD NEVER cast his consciousness so far before. It floated high above New York, perceiving in the noonday sky the thin, faint crescent of a waning moon. He wondered if one day he might cast his mind even to the moon, knew with a mounting exultation that his powers were already great enough

Yet he was as afraid to launch it on that awesome transit as he still was to send it delving into the tight subway tunnels in the rock of Manhattan. Phobias were too real now. Perhaps it would be different later . . .

He was young, as a man, younger as a recognized developing psi. As his consciousness floated there above the bustling city, exultant, free, it sensed that back where his body lay a bell was ringing. And the bell meant it—his consciousness—must return now to that body . . .

Dale V. Lawrence needed a lawyer urgently. Not that he hadn't a score of legal minds at his disposal; a corporation president must maintain a sizable legal staff. You can't build an industrial empire without treading

Without stressing the technological aspects of the strange powers of the widely-talented ones—the psis, espers, telepaths which have been so painstakingly forecast by Stapledon, van Vogt, Weinbaum, Vance and others—Messieurs Peterson and Staub have whipped fantasy, forecasts and facts into a stirring and mentally titillating story of a too-imaginative mind.

on people's toes. And you need lawyers when you tread.

He sat behind his massive mahogany desk, a stocky, slightly-balding, stern-looking man of middle age who was psychosomatically creating another ulcer as he worried about the business transaction which he could not handle personally because of the ulcer operation he was about to have. Neither the business transaction nor the operation could be delayed.

He needed a particularly clever lawyer, one not connected with the corporation. Not that he had committed or that he contemplated committing a crime. But the eyes of the law and the minds of the psis of the government's Business Ethics Bureau were equally keen. Anyone in the business of commercially applied atomics was automatically and immediately investigated in any proposed transaction as soon as BEB had knowledge thereof. There was still the fear that someone somewhere might attempt, secretly, to build a war weapon again.

Lawrence had an idea, a great, burning, impossible - to - discard idea. Lawrence Applied Atomics, Inc., had been his first great idea —the idea that had made him a multi-millionaire. But through some devious financing he had lost control of the corporation. And although his ideas invariably realized millions, the other major

stockholders were becoming cautious about risking their profits. Overly cautious, he thought. And on this new idea he knew they would never support him. They'd consider it a wild risk. He could blame BEB with its psis for that. BEB was too inquisitive. A business man just couldn't take a decent gamble any longer.

The real estate firm in Los Angeles was secretly securing options from individual landowners. Fortunately the firm employed a psi, one of the few known psis not in government service. Lawrence had wondered why this psi was not working for the government, but decided the 'why' didn't matter if there were positive results.

Lawrence knew a little about psis. He knew, of course, what was commonly known—that they possessed wide and very varied talents, that they were categorized as plain psis, psi-espers, esperpsis, telepaths and other things. They weren't numerous; the Business Ethics Bureau which employed at least sixty percent of the known psis showed thirty on the payroll for this fiscal year. *

Despite their rumored emotional instability, he knew that they were clever and he would steer clear of them in the present stages of his transaction. Although his idea wasn't unethical, the so far closely kept secret would be out if BEB investigated. Then anybody could cut in. BEB advertised

whatever it did on its video show, "Your Developing Earth."

So, he needed a lawyer who could act for him personally, now, and steer his project clear of the government service psis. But where to find a psi . . .

Of course! Bob Standskill! Standskill had helped him once years before when he had had that trouble with the Corporation Stock Control Board over a doubtful issue of securities he had floated to build Mojave City out of desert wastes. Without Standskill's techniques he never would have put that issue across. Standskill could handle this if anyone could.

Lawrence reached to the visiphone, punched the button sequence of Standskill's office number. The bell rang interminably before a rather bored young voice said, "Offices of Standskill and Rich, Attorneys-at-Law."

"I know," Lawrence said harshly. "I don't button wrong numbers. Is Standskill there? And where's your courtesy? There's no visual."

The picture came in then. Lawrence caught a flash of long, skinny legs going down behind the desk at the other end of the circuit; then he saw a most remarkable thing—the open collar of the young man's shirt seemed suddenly to button itself and the knot of the gaudy tie to tighten and all the while the fellow's

hands were lying immobile on the desk!

Impossible! Lawrence thought. I'm cracking up! Too many worries about the psis . . . I think I see them everywhere!

As the youth gulped as though the tie was knotted too tightly, Lawrence was sure that he saw the knot relax itself!

"I'm sorry, Mr. Lawrence, Mr. Standskill's on vacation and Mr. Rich is in court. May I help you, sir, or take a message?"

Undoubtedly the fellow had recognized him from news fotos.

"Well, who are you, the office boy?"

A frown of annoyance crossed the young man's thin, dark features. He snapped, "Are corporation presidents exempt from common courtesy? My name is Black—Martin J. Black. I'm not connected with this firm. I answered as a courtesy. Shall we disconnect?"

Lawrence was silent for a moment. He thought of the shirtie business and said, "You're a trainee psi, aren't you? A prospective service psi?"

"I'm afraid so. I wish I weren't. It's not a pleasant prospect."

"What do you mean?"

"Would you like to probe minds for a living? And it has its other drawbacks. You can't live normally and you'll have very few friends. Unfortunately no two psis are alike, which makes the

job more complicated. I'm un-normal, abnormal, subnormal or some other normal they haven't prefixed yet."

"Any special talents?"

"I'm afraid so."

"Rather young," Lawrence mused. Then said, "Are you economically stable?"

The young man hesitated, then said hastily, "Oh, yes, of course. Economically, yes. Somewhat more stable than most, I think. I'm in final training now. The legal phase comes last, you know."

"Then you're not committed yet? You've not taken the Oath of Anterhine?"

"No. I won't until the training is done. Wish I didn't have to then."

"And your training?"

"Complete except for criminal psychology."

"Would you like to make a hundred thousand dollars?"

Black said, "Your firm bought out Black Controlled Atomics, remember? That was my dad, and that was the end for him." He hesitated. "Let's say I'm vaguely interested. What's your proposition?"

Lawrence was silent for a moment. At length he said, "Being a psi your ultimate destiny is to aid in the development of the world whether you like to look forward to it or not. But would you not like to see desert areas developed through applied

atomics as Mojave City, Sanup Plateau City and Quijotoa City were?"

"Certainly," Black said quickly. "It's in my blood. The old man did well at such developments; in fact, he started Quijotoa. Sometimes I wish Standskill hadn't liquidated our estate, but my mother's will made it mandatory."

"How much do you know about Standskill's techniques?"

"I'm a psi," Black said. "I can find out anything I want to know!"

"Where is Standskill?"

"Paris. His first vacation in years. Going to be away quite a while."

"Will you come to my office?"

"Why?"

"I'd like to discuss a business proposition."

"What's wrong with doing it over the visiphone?"

"This is confidential," Lawrence said.

"Something not exactly legal?" Black asked. "Big deal, eh? The Control Board again—oh, oh! You'd better see Standskill!"

Lawrence felt uneasy. "Are you—are you reading my mind?" he stammered.

"Sorry," the young man said, smiling faintly. "It's easier that way. I dislike physical movement on such warm days as this. And it's easier for me to pick up your proposal this way than to go through that beastly traffic."

"Then you know?"

"Certainly. I'm a psi so I can read your mind."

"Do you accept the job?"

"Well, people in that area and the country in general would certainly benefit from the development. I don't know about that lawyer from Los Angeles though. They teach us in Service Psi School that non-service psis are not to be trusted. In fact, service psis are forbidden to associate with non-service psis. They're considered unethical."

"You're not in service yet, Black, and you must realize that the psi-ethics as taught in your school are much more strict than business ethics. If Standskill were here he'd certainly help me, and you know he has a fine code of ethics. It's desperate, Black. I need your services urgently. Won't you please accept the job?"

"I suppose so," the young man said wearily, resignedly. "Standskill would agree, I'm sure. But, as a trainee, I'm not supposed to meddle in business transactions. However, I'd hate to see you lose out on this because I know Standskill would unhesitatingly help you if he were here. Also, I'm curious to meet that psi from Los Angeles." His sharp chin grew resolute. "I'll try, Mr. Lawrence. And my conscience will be clear; I haven't yet taken the Oath."

"Will you need anything—any

physical help, any tangible thing?"

"I'll need your power-of-attorney."

"You'll have it before I go to the hospital."

"And, Mr. Lawrence," Black said softly. "About the surgery—don't worry, you'll be okay. It's chiefly psychosomatic, you know. In a couple of weeks you'll be fine. You couldn't have picked a better doctor than Summers."

Lawrence felt better already, a result of his talk with this brash young man.

"Thank you, Black," he said. "Thank you very much. But, look—as a psi, can you assure me that my idea is not slightly lunatic? I've begun to doubt that it will work."

Lunatic . . . Mentally unsound . . . Luna . . . Moon . . . The crescent of the moon in the noonday sky. Yes, he could go now . . . The transit was brief . . . No! He must go back, must bear the consciousness that was Martin Black back from this airless, cratered sphere! Panic seized him. He fled.

Lawrence was astounded to see the young man at the other end of the visiphone seemingly fall into a deep sleep, his head down suddenly on the desk.

"Black," he cried, "are you all right? Shall I send a doctor to—"

"No!"

The young man raised his

head. "I'm quite all right, Mr. Lawrence, though slightly exhausted. Didn't sleep well last night. Sorry! I'll ring you after I contact Dick Joyce."

"No names, please," Lawrence said. "I go into the hospital this afternoon, Black. You'd better not contact me there. The doctor said no business while I'm there. From now on you're on your own."

*Your own! He was drifting!
He fought it . . .*

"Right, Mr. Lawrence. Goodbye!"

II

Martin Black was tired. His consciousness had almost drifted off to home again, back to that old mansion on the Hudson River which Standskill had sold as directed under Black's mother's will. The old house in which he was born, where he had first found that he could sit in his room and send his consciousness questing down the hall to meet his father when he came home, pry into what his father had brought for him and surprise his parents later by invariably guessing correctly.

Sometimes now he wished that he hadn't "guessed" correctly so often in those days. Then his uncle Ralph wouldn't have mentioned his unusual ability to the Business Ethics Bureau and the psis wouldn't have investigated him. Once they found that he had such mental qualifications he

had been sent to the Service Psi School, a virtual prison despite his family's social status.

Anger suddenly choked him at the thought of what his uncle Ralph had brought upon him. The psi training had been so rigid, so harsh at times.

Well, of course they have to be sure that psis develop into useful members of society. But couldn't they treat you more normally, more humanly?

Now, perhaps he'd show them, repay them for the cruel years of a lonely, bitter youth. He hadn't taken the Oath yet, and if he were clever enough he'd never have to! The real estate lawyer in Los Angeles with whom Lawrence was making a deal had evaded service somehow, apparently. So it was possible.

He had learned long ago that money wouldn't buy him out of service. He'd tried also to purchase certain liberties at school. Some of the less scrupulous teachers had taken his allowance, but only one of them had ever given him anything in return. And of course he couldn't protest when he had violated Ethics to give the bribes. In any event, no one would take the word of an untrained psi over the word of a stable, normal human being.

During the stabilibation course one professor had permitted him to skip some classes. Now he wished that he hadn't missed them; he probably wouldn't have

this semantic instability to contend with now. Oh, well . . .

He was tired. He'd spent the previous night, or most of it, worrying about the miserable state of his finances. He needed money, a lot of money. But he wouldn't of course, admit that to Lawrence.

Lawrence would have understood why he needed money—even more than the hundred thousand he had offered. But then Lawrence might mistrust his motives in accepting the proposal so readily if he knew.

A year before Black had invested too much of his own money in a "sure thing" upon the advice of a fellow psi trainee who, he subsequently and sadly found out, had *economic* instability. Semantic instability was bad enough!

Not that Martin Black didn't have a hundred thousand dollars. He was, indeed, a rather wealthy young man, thanks to his mother who had been, to her son's knowledge—and to his alone—a psi with definite powers of pre-
vision and persuasion.

He recalled the tale Mom had told him of her first meeting with Dad, of how she'd lingered over Dad's well groomed nails three times longer than desire for a good tip made necessary, while she'd gently insinuated into his mind an idea that was next day translated into action on the stock market, with a modest in-

vestment from a modest purse that brought the young man a small fortune. After the wedding Martha Black dedicated herself to further improvements in the same direction.

As for Martin's father, his chief business assets had been an unswerving adoration of his wife and complete willingness to do with his money as she saw fit. The combination had been unbeatable.

When Martin's father was laid to rest, Martha Black, concerned over the future of her somewhat unusual son and fearing that economic instability might beset him, continued to improve the fortune he would some day inherit.

Long before the death of his mother five years before, Black Controlled Atomics, Inc., had grown sufficiently important to command the services of a lawyer of Standskill's caliber. Gradually Standskill had become general counsel to the Black enterprises and at the same time a close friend of Martha Black and her son.

It was chiefly in the latter capacity that the widow consulted Standskill as she approached the end of her life. Her Last Will and Testament, duly signed, sealed, published and declared, left one-half of the immediately-to-be-liquidated estate to her son outright. The other half was put in trust.

Under the trust Martin was to receive the income until he was thirty. If then an audit showed that his net worth, exclusive of the trust, had increased by thirty percent the trust was to end and Martin was to receive the principal. If not, the trust would end and the full amount thereof would go to his uncle Ralph, a prospect which caused Martin completely to lose his stability whenever he allowed himself to think of it. He just *had* to make the thirty percent!

R. W. Standskill was trustee, and the will gave him full power to invest the trust estate as he saw fit and without liability if his investments went bad and without any bond or security required of him whatsoever. More in token of appreciation of his services than anything else, Standskill was to receive one percent of the trust as long as he was trustee.

Martin Black's mind dwelled on the thought of the thirty percent increase. After five years of conservative investing he had taken some bad advice in the past year. And now he had to make some money fast in order to catch up to the quota which was necessary if he were to achieve his goal.

The Lawrence deal would give him his chance. But not if Standskill knew about it. The Lawrence deal seemed a good thing, but perhaps it was only

a *sure* thing if he kept to himself, for the time being at least.

He was so tired . . . *Fatigué* The French for tired. Funny, he did remember some of the French from school. Standskill was in Paris. Association. *Fatigué*. The word stuck. That club—Bob Standskill's favorite—*Le Cheval Fatigué* in Montmartre. The Tired Horse. Tired . . .

Sleep closed in . . . He drifted . . . and came to with a sudden start as a hand roughly shook his shoulder. It seemed as though he had been hovering mentally in a dimly-lighted cellar cafe, where there was a babel of voices speaking continental languages, and Standskill was there.

But, *no!* he couldn't have been in Paris any more than he had been on the meteor-pounded wastes of the moon! It was ridiculous. As far as he knew, no psi had ever been known consciously to flit to the moon—or unconsciously, for that matter—or to the other side of an ocean!

Standskill's partner, G. D. Rich, was shaking his shoulder. "What's the matter, Marty? Big night?"

"Big day," Black said. "Why don't you fellows stick around and take care of your business? I'm not even supposed to answer the telephone, you know, but someone has to!"

"Can I help it that the Legal

Secretaries Guild has called a three-day convention? There's not a secretary present in any law office in New York right now! I personally cut the phone in to the answering service before I left for court."

"Inadvertence, I guess," Black said thoughtfully.

"Inadvertence?" Rich said quickly.

"Mine. I must have cut it back."

He didn't tell Rich that he hadn't stirred from the desk since Rich had left. The switch was in the outer office. Had he with his consciousness floating high over New York sensed subconsciously that Lawrence was about to call and so cut in the switch? Had he built into himself something of the pattern of his mother, something of prevision or prescience, or call it what you will? Was a latent hunch power coming out in him now, something that would manifest itself by acts not consciously controlled? He hoped not! Semantic instability was bad enough!

III

Sleep evaded Martin Black again that night . . . There was no doubt that Lawrence had a great idea.

Lawrence held forty-five percent of the company's stock. He wanted control. In fact, he wanted outright ownership, but

this was not possibly because the other major stockholders, holding forty-five percent, seemed to be perfectly satisfied with their lucrative investment. Cautious inquiries had failed to disclose any inclination on their respective parts to sell.

There were, however, enough independent shares outstanding to give Lawrence control if they were added to his own. The thing to do was to figure a way to buy them. The problem was that no matter how secret his operations, news or rumors of them would certainly leak out. The shares would then undoubtedly jump to outrageous highs. Lawrence couldn't risk that. He'd not be able to buy sufficient shares if the price rose.

His corporation had completed Quijotoa City and had built Mojave City and Sanup Plateau City, had through applied atomics created verdant and lovely places out of wasteland and desert. It still owned the atomic piles that provided power for the cities and the profits therefrom were enormous.

Lawrence was progressive. He was at heart a humanitarian. He wanted to develop other areas more from the humanitarian view than the profit motive. He had learned long ago that the profits would take care of themselves.

In probing the man's mind, Black sensed Lawrence's great

desire for adulation, his great desire to be remembered as a public benefactor.

Now if only he, Martin J. Black, could benefit financially from this new deal—if he could corner enough of those independent shares, he could and certainly would vote them Lawrence's way. Then, perhaps the possibility of making the thirty percent he needed would approach probability, would reach it. With Lawrence's Midas touch the corporation would also realize millions in profits if the deal went through.

Figures revolved in Black's mind. If Lawrence—or if he—could corner six percent of the stock . . . Could some of the independents be persuaded to sell, *psionically persuaded*? Or one of the other major stockholders? No, that would be unethical and the strongest part of a psi's training was a fine code of ethics.

Black began to doze—and felt something ever so softly probing at his mind. *A probe!* Probably a service psi checking on him. *Why?* Just the usual check? No, it wasn't due.

He knew what to do. He had been probed before. Probing was part of the training at psi school but he had never revealed—and his tutors had never guessed—that he could create a block that could not be sensed by the prober. A block which could

close off whatever thoughts he wished to conceal.

He blocked his thoughts of Lawrence and the deal now, and opened freely that part of his mind which held the routine thoughts of the law offices. He felt that feather of thought brushing lightly through his brain, then it was gone as quickly as it had come.

There was a cold sweat over him but he knew that he had passed the test. Why the probe? Perhaps a BEB psi had wind of Lawrence's deal and by probing Lawrence's mind—or the mind of someone in the West Coast realty outfit—had somehow learned of Black's association with the industrialist. If that were the case there would be more probes. One time or another a probe might come at a moment of nervous tension or stress and the information would be gleaned from his mind before he could block!

He must work fast.

He arose and went to the visi-phone, placed a person-to-person call to Los Angeles.

"Dick Joyce?" he asked before the visual contact was complete, and only his voice went out.

The face that came in sync on the screen was round, jovial. "Well, hello, Marty!"

Lawrence must have called him, or else he plucked the name from my mind. But he didn't probe—or did he?

"Dick, do you register?" *With the mind now—cautiously!*

"Yes, Marty."

Pretend you're my personal friend, Dick. There's no psi on us but we may be wiretapped by BEB—lots of law offices are and trainees connected with them. Can a definite date be set for the picking-up of the options?

"It's good to see you again, Marty! When will you be coming out for another visit?" *Yes, the options are in the bag. My agents have them all lined up. Confidentially, they couldn't miss. The only trouble they ran into was that some of the landowners thought they were insane to be interested in the property and one of them actually suffered a sprained wrist from the hand-shaking of an overly thankful owner.*

"Soon. That's why I called you. Thought we should get together after all these years." *What's the latest date for signing?*

Tomorrow night.

Tomorrow night! That doesn't give much time! Since I'm acting for Lawrence I have to see what we're getting.

Well, Lawrence told us to work fast. But I agree that it's a good idea that you see the properties. "How about this weekend?" His voice was casual.

Tomorrow evening local time it is then. But where will we make psi-contact?

A mental picture of a map. Desolation . . . Oklahoma . . .

"Okay, Dick. See you then. Regards to the family!"

"Goodbye, Marty."

He rang off.

He was tired. He went to bed and sought sleep, praying that the block his fatigued mind had set would remain firm.

IV

Martin Black passed a very bad night. Maintaining a mental block when asleep is a major feat, especially when one has semantic instability and a dream can so often be so realistic as to bring one's consciousness awake and mentally screaming miles from the physical being it has involuntarily left.

He dreamed with incredible regularity, waking five times out of nightmares, five times strangely on the hour as though he had tied some part of his mental being to the irresistibly moving, luminescent minute hand of his electric clock. *Time is of the essence*, he had told himself during the psi-visiphone contact with Joyce. *Association!*

Two A.M. He had dreamt of Joyce, dreamt that Joyce had somehow revealed the proposed transaction to BEB, putting Dodson on his trail. Wide awake now, he forced himself to think of the options which must be picked up the following night, options drawn so that no only

the landowners must sign them but both the realty outfit and he, as Lawrence's attorney-in-fact, as well. Could he sign for Lawrence if Joyce had spilled? . . . No, it was only a dream. Joyce was so very stable!

Three A.M. He had dreamt of Standskill, tall, lean Standskill striding through the lovely early morning along the Champs Élysées, moving purposefully. He had even dreamt he had for a moment invaded Standskill's mind and caught the lawyer's pounding thought, "Lawrence! *Buy, Lawrence!*" Oh, but that would never do. The service psis would catch Standskill, would test the ethics of it now that Joyce had spilled, would cause Standskill to be disbarred. But Standskill didn't know! A dream. *A lunatic dream.*

Four A.M. The coincidence of the timing of his wakings struck him then. For a moment the latest dream eluded him and then the sense of airless cold, a bleak, cratered landscape, stark stars staring in a lunar night swept coldly across his mind. He shivered, drew the blanket over him, thought: *How many shares? Six thousand? I can do it. I'll contact the broker in the morning. Six thousand at two hundred per. One million two hundred thousand dollars.*

But that would raise the price, the attempt to buy so many shares. You can't buy a million

plus in one stock without driving the price up—unless you manage to buy all the shares at once! If only he could persuade—psionically persuade—but he couldn't! It wasn't ethical.

His mind drifted . . . I'll call the broker in the morning. Perhaps he can start picking up some of the independent shares when the market opens. If only he could snag the four thousand that —what was that name in Lawrence's mind?—yes, Redgrave! The four thousand that Redgrave has! That would be a start!

Redgrave had always fought Lawrence tooth and nail. Lawrence would derive vast personal satisfaction from seeing Redgrave an *ex-stockholder*. Thankless cad! Investment in the corporation had helped make Redgrave a very wealthy man. Lawrence stock was only part of his vast holdings. Redgrave was definitely out of the red!

Black chuckled, then told himself that this was a grave and not a laughing matter. Sleep was coming again . . . *Out of the red. Grave. Redgrave!*

Five A.M. He awoke in a cold sweat . . . This time the dream came back slowly, drenching him with fear as it came. It was sheer madness, this dream! To have even considered investing in Lawrence Applied Atomics! The Government would never condone the deal Lawrence was contemplating—the Applied Atomics

Corporation was nearly insolvent, the BEB psis were investigating it . . .

Black tossed fitfully on the bed, seeking sleep desperately, seeking to escape the black night pressing in, to evade the imagined—or was it real?—probing minds of service psis.

Six A.M. He almost forgot the fears that had assailed him an hour before. He realized then that in the last few minutes or seconds or however long the latest transient phantasm had been in his mind he had dreamt of his broker pacing a dimly-lighted chamber, muttering, "The man's out of his mind. Economic instability, that's certain. Thinking of selling good stock to invest in Lawrence Applied Atomics! Not that Lawrence stock isn't fairly good, but he'll never make enough out of the corporation's piles; the returns are not that great!"

8 A.M. Black stretched, felt strangely relaxed. He realized then that as he had slept and, despite the fitfulness of his sleeping, his mind had apparently gone on analyzing the possible reactions to the big deal.

He arose, took a shower, shaved, ate breakfast. Then he went to the visiphone and buttoned Charles Wythe, his broker, at his office.

"Charlie," Black said to the cadaverous looking man who answered. "Where's the boss?"

"Went to see a psychiatrist."

"Why?"

"I don't know. What's on your mind?"

"I want you to do some selling and buying for me. Sell whatever you like, but buy Lawrence Applied Atomics."

"Look, Marty, let's not go off half-cocked. Last year you had a sudden brainstorm and remember what happened. Lawrence may be a good stock, but it won't help you to build up to that thirty percent you need. Not in the time you have to do it in. It's bad enough for you to take a big licking once. Let's not be stupid again."

"Now, Charlie, don't be nasty. I want you to buy Lawrence as quietly as you can. I want six thousand shares at the current price. Get them for me."

"Are you shaken loose from your psyche or id or whatever?" Wythe cried. "Do it quietly, the man says, do it quietly! You can do it about as quietly as they launched the space station. Where do you think I can get six thousand shares of Lawrence?"

"Why, you buy them!" Black answered innocently. "Isn't that what you do down at the Stock Exchange?"

The broker groaned. "Sure, that's all I do. Buy, that is. But not Lawrence. Look, Marty, see this chart? Yesterday was a big day for Lawrence Applied

Atomics. It was unusually active. Three hundred shares changed hands. The day before it was one hundred. Once in my memory Lawrence had a four thousand share day. That must have been when Redgrave bought in. Now you tell me how I'm going to get you six thousand shares, get them quietly, and get them at the current price!"

"Start buying," Black said, "because I've got a hunch you'll find them. My mother had hunches, didn't she? Did she ever tell you or the boss to buy the wrong stocks? Did she—"

"That was your mother, Marty. What about that hunch you had last year, the one that cost you a couple of hundred thou—"

"That was last year!"

"So what's changed?" asked Wythe.

"Maybe I've changed, Charlie. Do it; that's all I ask."

"Okay, Marty. But I think you're out of your mind, especially with what was on the morning news."

"And what was that?"

"Lawrence is in bad shape. He's not likely to pull through. They operated last night, in case you didn't know."

"But that should drive the stock down!"

"Why? It won't affect the profits from the corporation's piles."

"No. I agree. But that's not the only thing that keeps the price

up. What about Lawrence's reputation?"

"Well, there's also a rumor about a government investigation of the corporation," Wythe admitted. "That might have some downward effect."

"Buy, Charlie, buy! I'll ring you later."

Black rang off. He felt an overwhelming confidence. He had only one small doubt in his mind —during or following one of those disturbing dreams had he been sufficiently overwrought to have relaxed his mental block, thereby letting in a fleeting probe from a service psi who would then have gleaned, in a moment, knowledge of the proposed transaction?

The unease waned. The exuberant confidence was in him again. The prescience of Martha Black?

He went out and caught a helicab to the law offices. He'd be a good trainee to the eyes and minds of anyone who might check. If the service psis were on his trail, he'd show them how good a trainee he was. He could check with Charlie Wythe later.

V

At ten A.M., Stankskill's partner, G. D. Rich left the office to attend court.

At ten-thirty A.M., a contact call came whispering to Black's mind. He thought it at first a probe and blocked part of his

mind; then relaxed as it realized it was a psi asking with overbearing politeness for him to connect the visiphone circuit. The mental touch seemed somehow familiar, but it wasn't Joyce. He knew it wasn't Joyce; there was something unsure and tentative about the whisper of thought.

Black psionically cut in the outer office visiphone connection. The bell rang almost immediately. He switched on the inner office instrument and a familiar face came in sync on the screen—that of Peter Dodson, the principal administrative officer of the BEB psis.

Dodson's blondly handsome face showed concern. He said, "I wanted visiphone contact, Black, because of an unfavorable report I've received on you. I'll get to that in a minute. First, I'd like to explain the background. As you may have learned from the news this morning, we're investigating Lawrence Applied Atomics because of a tip we'd received from Los Angeles that Lawrence is engaged in a venture which will eventually affect corporation funds without proper advance authorization.

"Finding that Lawrence had some dealings with Standskill in the past, we thought that Standskill might be able to shed some light on the new venture. When we were unable to contact Standskill, we sought to contact you

psionically last night, but found that your mind was a completely unreadable jumble of nightmares, filled with phobias and instabilities. We stopped probing then, realizing that you might be seriously ill."

Apparently visual examination had convinced Dodson that Black wasn't as ill as had been thought. Black felt the feather touch of a probe coming now and he blocked, his thin face expressionless.

"I did have a rather bad night," Black said. "Association. Semantic instability." He felt the tentacle of thought that was sweeping across his mind.

"Well," Dodson said, his eyes probing from the screen, "it's obvious *you* know nothing of the Lawrence deal. Strange, though, since there's a record of a call placed to that office by Lawrence yesterday, and as far as we have been able to determine only you were there and only you could have answered. How do you explain that?"

Easy now! The block is most difficult to maintain when you're lying. Easy . . .

"There was a call," Black admitted, "from someone I don't know, a fellow who wanted Standskill. Wouldn't say why or give his name. The moment I told him Standskill was in Paris he said with some reluctance that he would have to contact another law firm. The caller was proba-

bly Lawrence. If you could describe him—”

“So Standskill's in Paris! The answering service didn't know that. Well, that rules him out. Thank you, Black. Are you sure you're all right?”

“Rather tired,” Black said. “Overwork, I expect. The training is rather strenuous, and I do wish you wouldn't probe. As you found in psi school, my powers have a very delicate balance.”

The probe withdrew hastily.

“Sorry, Black. Very sorry. Perhaps you need a rest. I'll be only too glad to send through an order—”

“Oh, thank you, sir,” Black said, trying to make it sound fervent and properly subservient. He sent a thought of thankfulness after his words, a weak one. He must not appear too strong.

Dodson rang off.

The coast was clear! They would not probe again soon!

Black immediately called Charles Wythe, found his broker's cadaverous face puzzled.

“Marty, the market's crazy! I managed to pick up four thousand shares within ten minutes after the market opened. One purchase. The broker from whom I obtained them represented Dan Redgrave—”

“Redgrave!” Black almost shouted.

“Yes, Redgrave. He said Redgrave is plain cuckoo. Ordered him to sell at one hundred fifty.

Said he'd bought them at that and would sell them at that. No profit wanted. Glad to get out in time to recoup his original investment. What's cuckoo about it is that, except for the momentary flurry when we picked up the Redgrave shares, the stock has been rising all morning. It's up to two twenty-five as of this moment.

“Lawrence must have someone else buying regardless of the price. Three concerns are still trying to buy at the present price. Ethics forbids me to ask who their clients are. Not that they'd tell me anyway! Now, look, Marty, do you want me to buy at that price, if I can, that is?”

“Well, I must have six thousand, unless Lawrence is buying and I'm quite sure he isn't. See if you can find out who the buyer is, won't you?”

“Everybody's crazy today,” the broker said. “I'll call you back.”

Wythe did, a few minutes later.

“I'm afraid it's no use, Marty. There's not another share to be had. There's been news from the hospital. Lawrence has rallied. Although he's still in a coma, his chances are good for recovery. Not only that, but the Business Ethics Bureau has issued a statement to the effect that the tip they'd received about Lawrence and a deal has not been proved to have a foundation in fact. Those things have put the

stock way up. Everybody wants to buy Lawrence but nobody wants to sell—except me! Let's sell, Marty!"

"Not on your life," Black said decisively. "And, look, we *must* get two thousand more shares! Get them, Charlie!"

He clicked off again.

So Dan Redgrave had sold at a ridiculously low price! Had his consciousness wandered in those dreams? Had he psionically persuaded Redgrave to sell? That wouldn't be ethical. But do ethics apply to *involuntary* acts?

His mind was in turmoil. He dared not exercise his psi powers again just now. He feared above all the wrath of Dodson and the other service psis. If they came to suspect that he had persuaded Redgrave—that he had, according to Ethics, misused his powers . . . he knew only too well that there are ways of banishing psi powers, insulin shock and other treatments.

And for all his present loneliness he was beginning to realize his latent powers—powers which, when fully developed, would doubtlessly bring him into contact with others like himself, with someone who could share the fierce ecstasy of probing with the consciousness to the moon, or even farther, at the speed of light at which thought moved. No, perhaps he need not always be alone . . .

He went out to lunch, re-

turned, called his broker. Wythe told him there was no activity in Lawrence. The afternoon wore. A few minutes before the exchange closed the broker called.

"It's hopeless, Marty," said Wythe. "Let's sell. The price is still two twenty-five and nothing for sale. How about it? Three hundred thousand profit in one day."

It sounded attractive. Black hesitated, then thought of Lawrence, good, old would-be humanitarian and philanthropist D. V. Lawrence lying in coma. Lawrence, whose dreams were in his hands now. He had come to like Lawrence, the trail-blazer where there were so few trails to be blazed. He had to help him. If worse came to worse he would cast Ethics to the winds. He'd have to! His conscience couldn't permit him to do anything else. He would psionically persuade at least one of the other stockholders to vote Lawrence's way.

Well, at least his mind was made up. Lawrence would have his options. And with forty-nine percent of the stock between them they could gamble on getting a favorable vote.

"What about it, Marty?" the broker asked impatiently.

"Sorry," Black said. "The answer is no, Charlie! I want that stock."

He rang off.

Moments later his conscious-

ness was on its way to keep the rendezvous with Joyce high in the evening sky over Oklahoma, up where the blue of the atmosphere turned to the black of infinity.

And moments later lights blazed over a table in a realty office in Los Angeles where no one sat. But pens lifted and wrote . . .

"D. V. — Lawrence by Martin J. Black, his attorney-in-fact."

"J. F. Cadigan Realty Corporation by Richard Joyce, Vice-President."

Another pen lifted with the invisible but delicate twist of a feminine psi-touch.

"Before me this ninth day of September in the year Nineteen Hundred and Seventy-six Anno Domini psionically appeared . . ."

The options were psigned, come what may!

VI

An oak-panelled conference room. Lawrence's first vice-president reading the proposal. The board of directors. The major stockholders. Smaller ones. Attorneys-in-fact for both Lawrence and Black.

And *Bob Standskill!*

What was Standskill doing here?

But the first vice-president had finished reading the proposal and was asking for a vote.

Lawrence—forty-five thousand shares—*yes!*

Maryk — twenty thousand shares—*no!*

Carrese—nine thousand shares —*no!*

Tonemont — seven thousand shares—*no!*

Black—four thousand shares —*yes!*

Turitz—five thousand shares—*no!*

And the smaller stockholders, one by one—*no, no, no!*

Forty-nine thousand shares—*no!* Forty-nine thousand shares—*yes!*

Black felt ill. His hovering consciousness almost fled from its invisible vantage point above the conference table back to the mansion on Riverside Drive, back where the memories of Martha Black remained . . . But it wavered, stabilized . . .

Standskill rising, so implacable, so sure and saying, "Two thousand shares—*yes!*"

Black probed Standskill's mind almost involuntarily then, realizing instantly that he should have disregarded Ethics and probed before. Standskill was a psi, a *non-service psi!* And Black knew then that when his consciousness had flitted through association to *Le Cheval Fatigué* in Montmarte, Paris, and had fixed there for a brief unstable moment it had yielded to Standskill all knowledge of the Lawrence deal, persuading Standskill to order his brokers to buy the corporation's stock for the trust . . .

Black's consciousness sped to join Joyce's in a law office in Oklahoma. It watched the land-owners signing the deeds even as it signed psionically the checks which represented the good and valuable considerations.

The deal was closed.

VII

Joyce, tell me—did you, to your knowledge, tip off the BEB psis?

Yes. Inadvertently, of course. I had a nightmare. I'm afraid I'm sometimes unstable, anonymously so, when asleep. Only then, though, thank Heaven!

And, Joyce, why aren't you in service?

For the same reason you can't be.

Confusion.

What do you mean?

Your mother knew.

My mother?

Yes, Marty, don't you realize that only unstable psis are taken into service? Stability is the mark of the superman. Do the majority of men want the minority—the supermen—running their world even though the supermen are their brothers, sisters and children? And they must surely realize that all mankind will evolve to psis one day. Marty, you were in psi school. So was I. Did you complete Stabilization? . . . I see you didn't. No psi does! They let you think you're getting away with some-

thing when you skip classes, but you're not!

Fortunately, if you are strong enough, you stabilize on your own. Perhaps you'll realize now that your mother gave you the incentive: the thirty percent angle, realizing that an uncle you definitely did not like would inherit if you didn't strive to the utmost. It worked.

They can't touch me, Marty and they can't touch you! We can elude them mentally and physically. They know they can't touch us; so they just have to tolerate us! I can read in your mind that you've stabilized. You can fit physically now. Why don't you try? Lawrence is waiting . . .

Black's consciousness sped back to his body. His body lifted and sped to a hospital room.

Lawrence was awake. He viewed Black's materialization with incredulity.

"The deal is closed," Black said.

"But—you—" Lawrence stammered. "Closed?"

"Yes. And, considering the shares I hold, I guess that makes me something of a psilent partner of yours!"

A brash young man, Lawrence thought. A very brash young man!

Black grinned. *Thirty percent? He couldn't miss!*

They shook hands.

It was a deal. Psigned, sealed and delivered!

this one problem

by . . . M. C. Pease

The shortest distance between two points may be the long way around—and a path of dishonor may well turn into the high road to virtue.

MARC POLDER, Resident Comptroller of Torran, strolled idly down the dusty littered path that passed for a street. In the half-light of the pint-sized moon overhead the town looked almost romantic. One day, when civilization had at last been brought to these Asteroid bases, memory would make Torran heroic. But now, with the fact before the eyes, it was merely dirty and squalid. Only the scum of the Solar System called it home.

Idly Marc Polder pushed a swinging door aside and entered what passed on Torran for a restaurant. Pushing his way through the tables until he saw his only aide, Female Personnel Manager Lee Treynor, he sat down.

"What's new?" he asked.

"Not a thing." But for a certain softness of voice and curve of unmade-up lips, Lee could have passed for a boy. Her light hair was short, she wore a man's coveralls. She added, "Only the usual murder, arson and brigandage that you don't want to hear about."

"Don't let such trifles get you down," said Marc with a crooked half-smile.

Piracy in the past has acquired the gaudy technicolor of high romance. In the present, piracy is as tawdry as tabloid headlines. But piracy in the far future, when presented as vividly as in this story, can be scary stuff.

"I'm fed up," the girl said shortly. "I must have been still wet behind the ears when I agreed to come out here two months ago. I thought I was going to help establish a place where decent people could live and work. So far I've just watched my boss swig Venerian swamp beer with the worst elements in town, and do nothing about the lawlessness that runs riot all over the place."

"Look, lady," Marc answered gently, "I certainly admire those lofty sentiments of yours. I admit they are maybe what ought to be. But the way I see it they just don't fit the facts. Out here the Federation space fleet is supposed to be the big stick. Only right now it's off playing mumbly-peg with the Venerians.

"The Big Wheels seem to think there'll be a shooting war in a couple of months. There's only three or four destroyers left in the whole damn Asteroid Belt. And without the big stick behind me I'm not hankering to commit suicide by looking for trouble."

Marc smiled again ruefully. "What I can do I try to do," he added with sudden earnestness. "I figure the most important thing is to protect the Asteroid Development Company so they can buy the nuclear ore the Astrodites bring in. Without that ore the Federation's going to be in a hell of a fix if it actually does come to war. And along with that there's the matter of guarding the

stuff the Navy's got stored here." He waved toward the Navy warehouse that could be seen outside the window.

"Listening to and fraternizing with the characters you call the biggest crooks in town," the comptroller went on with a shrug, "I've a chance at getting tipped off in advance to anything that may make trouble for our interests. As freely with me around. And it's a long as I ignore their rackets they accept me in their midst, talk hell of a lot easier to stop something when you know the score beforehand."

The young woman's lips parted as if she seemed about to say something. Then they closed in a thin line. Obviously she was not happy with Marc Polder's explanation. She was too young to be willing to compromise her ideals, no matter how potent the logic of necessity.

She was about to leave the table when the shrill screams of a distant whistle sliced through the noise of the crowd. Voices broke off in mid-sentence and bodies froze into immobility. As the siren's piercing tones faded the restaurant's customers looked at one another in silent terror. Then, as the shock wore off and unanswered questions were beginning to fly, a man suddenly ran in through the revolving doors.

"Raiders!" he gasped. "The listening gear's picked up a signal that's not from any Astrodite or

destroyer. Signal Corps figures it's a pirate!"

There was a mad rush for the doors and seconds later the place was empty except for Marc Polder, still sitting calmly at the table drinking his beer, and Lee Treynor who sat watching him.

"What are you going to do?" she finally asked.

"I don't know. What *can* I do?" Marc said.

"Good heavens!" the girl exploded. "Are you just going to sit there guzzling beer while pirates take over the town?" She stared at him incredulously.

"What do you suggest I do?" the comptroller asked. "We haven't anything to fight with. There's no way we can get help. As far as I can see there's nothing we *can* do—not yet anyway." He calmly lifted his glass.

"You mean we're just going to sit here?" the girl gaped.

"Sure. The others left to hide their money and valuables. I've got nothing to hide."

"What about that stuff the Navy has cached in their warehouse?" Lee asked. "That new rocket fuel their destroyers use when they need a little extra push. Isn't that worth hiding?"

"The hyper-degenerate-thorium, you mean? I'd like to hide that somewhere," Marc conceded. "But where do you hide ten tons of stuff in five minutes? Besides, it wouldn't do the raiders any good. Too hot. It'll burn out

their jets. They'd go up like an A-bomb two minutes after they threw it on. They know that. Only thing they could do with it is sell it to Venus. Not that that would be bad. Shortage of H.D.T.'s may be the chief reason why there's been no war started yet. But for now there's nothing you and I can do." Calmly he lit a cigarette.

"Of course," he went on, smiling, "we *could* bum a ride out with some of the company men. No doubt they're all hightailing it away from here in their space-buggies."

"I'm surprised," Lee said with a trace of sarcasm, "that you're not doing just that, leaving me and the other women to the beasts!"

Marc eyed her unblinkingly. "You know as well as I do that most of the females on this asteriod take pirates in their stride. They might even welcome a change of partners. As for you"—he paused—"you stick close to me and keep your pretty mouth shut. I think we'll manage somehow."

In silence they walked back to the comptroller's office.

"Marc," Lee said as they entered, "what about the new radar? Maybe we could get a message out with it, in code or something."

"What?" Marc turned, astonished. "You want to play our only hole-card on an off-chance

like that? There aren't more than four or five people here who even know it's been set up on the other side of the asteroid. There's hardly a chance the raiders will find out about it. And you want to blast the news at them!" He looked disgusted.

The girl said stubbornly, "You can't just give up without a fight. And that's our only weapon."

"Look," Marc said grimly, "that's only a second-hand destroyer radar, so it wouldn't carry far. No. I'm not going to use it on any such harebrained scheme as that. And if you breathe a word about it I'll take you apart." He added with a faint smile, "Not that *that* wouldn't be a pleasure."

Looking at him she knew he meant the tender joke and the knowledge helped her.

"I think," Marc went on after a moment, "I'd better warn the boys over on the radar project or they might accidentally start it up while the raiders are here." He closed the door as he went into the inner office to make the call.

A moment later he emerged and studied the still angry girl through half-closed eyes. She blushed under his scrutiny, said coldly, "What's the matter? Afraid I'm not attractive enough for our visitors?"

He grinned. "You could do with a mite of padding here and there. But I was thinking the other way, as a matter of fact. It's

a pity you don't have a small mustache."

"You don't have to insult me!" Lee cried bitterly. "I'm glad I'm thin!"

"I'm not insulting you," Marc said mildly. "I even wish you were a bit skinnier. It's the plump girls our guests are going to be looking at first. Remember now —you stick right with me and keep your mouth shut, d'you hear?"

"I hear," she said shortly. But he could see the fear she was trying to hide and he knew she was honestly frightened for the first time in her adult life. She said, "What will they—be like?"

"If it's John Mantor, and I suspect it is, they'll be rough," Marc informed her. "He's a tough ex-pilot who got bounced off Space Patrol and turned outlaw. He seems to hold a grudge against the whole human race. If it's one of the others—it may be a lot worse."

"I don't see why outlaws are allowed to exist at all," she said.

Marc sighed, shook his head. "A lot of people have felt that way over a lot of pirates over a lot of eras. But somehow they keep turning up."

A few minutes later the space-scared pirate ship had made a rocky landing in the middle of the small spaceport and John Mantor, pirate chief, drove up to the comptroller's office in a cloud of dust. He was tall and dirty and thin and

tough. "Which one of you is the comptroller?" he demanded, as he faced Marc Palder and Lee Treynor.

"I am," Marc said, not rising from behind the desk.

"Then you're the guy responsible for any trouble here," Mantor said. "So I'm going to tell you how to avoid trouble." His brutally scarred face twisted into a grin.

"There's a lot of loot around here. I'm not going to ask you where it is. My boys can take care of that matter. But there's also the Navy warehouse. Maybe we won't know what some of the stuff in there is for, so you're going to tell us."

Mantor leaned across the desk, his eyes as hard and cold as chips of duratite. "And if you won't, there's going to be trouble and you'll be it—you and your friend here."

Marc sat impassively, meeting the hard-eyed gaze. "That warehouse is government property," he said. "So far, there's only piracy against you. But if you raid that building you're going to be the personal problem of the Navy. If I were you I'd leave it alone."

"You let me worry about that," said Mantor.

"Besides," Mark went on, "I don't see what good the stuff in that warehouse can be to you. There's little of cash value in there. And I doubt if you can

use any of the parts on your ship."

"That could be," Mantor replied. "But on the other hand, maybe we can find a market for certain items." He smiled coldly. Watching, Lee knew he referred to Venus. She sat perfectly still, praying for him not to notice her.

Mantor spread his hands on the desk, a look of hatred and ferocity on his face. "What I want to know is—are you or are you not going to cooperate? And I want to know fast."

"Don't get me wrong," Marc said softly. "I'm not telling you what to do or what not to do. But that warehouse is the thing I'm here to protect. And if I were to agree to help you, the Navy would be after me, too. So I've got to say to hell with you."

John Mantor rocked back on his heels, hooking his thumbs in his belt. A slow smile spread over his face. "Okay," he said. "I think I get what you mean. So I guess we got to work you over. And we'll do it where there aren't any outside witnesses."

Marc grinned back at him.

Lee was puzzled. It took her a moment to realize that the grins sealed a contract between the two men. Marc would cooperate if he were beaten up enough first to satisfy a later investigation—but not too severely for his own comfort!

Lee found it difficult to hide her contempt. She stared at her hands, clenched in her lap, and

waited for Mantor to leave.

The looting and destruction were well under way an hour later when a couple of Mantor's men joined their chief, who stood with a somewhat bruised Marc Polder and an unharmed but furious Lee Treynor. Between them they carried a small, obviously heavy box.

"You know what this stuff is, boss?" one of the men asked. "They got a hundred or a hundred-fifty boxes like this in there." He nodded at the Navy warehouse.

They set the box down and Mantor flung back its lid. It was filled with small grey pellets. Mantor picked up a handful and stood fingering them.

"Looks like rocket fuel," he said. "Only I've never seen any this color. And it's too heavy, also." He turned to the comptroller. "You tell me what it is."

Marc shrugged. "I don't know. It's a Navy secret."

Mantor's eyes glinted. Without warning his fist flew out, sent the comptroller sprawling in the dust where he lay stunned. Lee's hands flew to her mouth barely in time to suppress a cry.

After a few moments Marc rolled over slowly and pushed himself painfully to a sitting position. He looked up at Mantor who stood watching him coldly, his fist flexing.

The comptroller licked his lips and looked around at the several men who stood watching, their

faces impassive. "Okay," he said in a none-too-steady voice. "I'll tell you. You'd find out anyway from the files."

"Cut the alibis and give," Mantor growled.

"Keep your shirt on." Marc's voice indicated he was regaining control of himself. "It's H.D.T.—Hyper - Degenerate - Thorium—the stuff the destroyers use to get extra push."

Mantor roared his glee. "Pack it aboard, boys—all of it! And put it where it will be handy, just in case."

This was it, Lee thought as she stood by, watching—the final bitter pill. Mantor had as much as told them he was working for Venus. And the H.D.T. was all Venus needed to be ready for war—a war that might well blast civilization from the Solar System. Strange that so much should depend upon one man; tragic that the one man was a weakling.

With an effort Lee forced herself to be fair. It might have done no good to lie, she conceded. But anyone with even a normal amount of simple courage would have tried.

It was about two hours later when the siren went off again like a banshee wailing to a low-hanging moon. Men came running from all directions, shouting questions at the tops of their voices.

A midget auto came skidding down the pirate ship's ramp, its driver standing on the accelerator.

The car knifed through the swirling crowd, barely missing several people, and skidded to a dusty stop directly in front of Mantor.

"Radar signal!" the driver yelled. "The search receiver picked up a signal that sounds like a destroyer's radar. It suddenly came in strong. Probably sneaked up on us from behind that damn moon. It's coming in fast and braking hard!"

There was a mad scramble as the looters raced for their ship. Heavy-handed horseplay was forgotten. They knew they were helpless against a Navy destroyer. Their only hope lay in a fast getaway. Seconds could easily spell the difference between safety and defeat.

In less than ten minutes the ship's locks were sealed and they fired off. As the flames roared out and the huge ship lifted swiftly it was obvious that they were throwing on all the fuel their jets could take.

Marc Polder had faded back into the crowd at the first sound of the siren. As he stood watching the blastoff Lee joined him, hands in her pockets, looking more than ever like a boy.

"Maybe my idea of asking for help wasn't so far-fetched," she said quietly. "Maybe the patrol might have been here in time. Maybe you wouldn't have had to tell them about the H.D.T."

"Maybe," Marc answered without turning his eyes from the

dwindling point of reddish light high in the dark sky.

"And just by way of keeping the record straight," the girl went on in a voice that began to rasp, "you know as well as I do that the files don't list any H.D.T. It's under a code name."

"Maybe," Marc replied in a noncommittal tone.

The point of light in the sky suddenly turned blue. Lee was staring at it too, now. And she knew also what the change of color meant. Mantor had started to use the new fuel!

Suddenly there was a blinding flash. Lee cried out and staggered back, covering her eyes. Marc, who had closed his eyes when the color change came, took hold of the girl's arm.

"I told you what would happen if they used the stuff," he said gently. "It's too hot for their jet chambers. It melts the walls. A lot of gas piles up in the tubes. The pressure pushes the fire back. And when it gets shoved back into the recoil chamber and you lose the protective layers of cold gas there—well, then you've got to look for your ship with an ionization gauge!"

"I told you all that long ago. The trouble is, you're too idealistic, Lee. That's not the same as *having ideals*. I admire ideals—I might even confess to a few of my own. But *you* don't stop to figure out just what your ideals

are—exactly what you're fighting for.

"You come to a crisis like this one and you forget about the *big* goal. All you see is this one problem. And by giving them yes-or-no answers—good or bad, brave or cowardly—to the problem of the moment—you may miss a simple solution to the big one.

"You've got to keep a cool head and never forget for even a moment exactly what it is you want to accomplish." His voice was gentle, and it held no rebuke.

"All right," said Lee unhappily, "you win. You needn't bother to rub in the salt. I was going to chase you through all the inquiry courts for this. Instead, you got a lucky break, so I can't do a thing. You ought to be tarred and feathered through every city of the Federation, but because a destroyer happened to stumble in here at the right time you'll end up a hero." Her voice caught in a sob.

"Oh, the destroyer," Marc replied. "Ah, yes, that *was* lucky, wasn't it? The only hitch is—there wasn't any destroyer. Probably not one within a million

miles!" He laughed as Lee turned surprise-widened eyes toward him.

"What they thought was a destroyer was the radar system on the side of the rock, bouncing a signal off the moon. I gave the radar boys the word just before Mantor dropped in on us. The crew did a damned good job of juggling the power and frequency and all." He grinned. "Remind me to buy them a beer sometime."

He laughed then at the girl's expression as it changed from bitter disillusion to something akin to awe, close to hero-worship.

"And this, by the way," Polder said, "is as good a time as any to tell you that I'd like to see you look like a woman, for a change. How about changing into a dress before we go into town. You know, I've never seen you out of that uniform?"

She hesitated, unsure of herself now. "That will take a little time," she said doubtfully.

He put hands on her slim shoulders, gave her a gentle shove toward her quarters. "We've got time," he told her. "Lots of it. But I've been waiting quite awhile."

The little haloed gunman to your right is a gentle reminder that FANTASTIC UNIVERSE is the bedside companion of THE SAINT DETECTIVE MAGAZINE, which brings you the best detective-mystery authors, and always a new Saint crime-adventure by Leslie Charteris.



two
plus
two
makes
crazy

by . . . Walt Sheldon

The Computer could do no wrong.
Then it was asked a simple little
question by a simple little man.

THE LITTLE MAN had a head like an old-fashioned light bulb and a smile that seemed to say he had secrets from the rest of the world. He didn't talk much, just an occasional "Oh," "Mm" or "Ah." Krayton figured he must be all right, though. After all he'd been sent to Computer City by the Information Department itself, and his credentials must have been checked in a hundred ways and places.

"Essentially each computer is the same," said Krayton, "but adjusted to translate problems into the special terms of the division it serves."

Krayton had a pleasant, well-behaved impersonal voice. He was in his thirties and mildly handsome. He considered himself a master of the technique of building a career in Computer City—he knew how to stay within the limits of directives and regulations and still make decisions, or rather to relay computer decisions that kept his responsibility to a minimum.

Now Krayton spoke easily and freely to the little man. As public liaison officer he had explained the computer system hundreds of times. He knew it like a tech manual.

Walt Sheldon is bitter-bright in this imaginative short satire of Man's sell-out by a group of staunch believers in the infallability of numbers.

"But is there any *real* central control, say in case of a breakdown or something of that sort?" The little man's voice was dry as lava ash, dry as the wastes between and beyond the cities. Tanter, was the name he'd given—Mr. Tanter. His contact lenses were so thick they made his eyes seem to bulge grotesquely. He had a faint stoop and wore a black tunic which made his look like one of the reconstructed models of prehistoric birds called crows that Krayton had seen in museums.

"Of course, of course," said Krayton, answering the question. "It's never necessary to use the *All* circuit. But we could very easily in case of a great emergency."

"The *All* circuit? What is that?" Mr. Tanter asked.

Krayton gestured and led the little man down the long control bank. Their steps made precise clicks on the layaplast floor. The stainless steel walls threw back tinny echoes. The chromium molding glistened, always pointing the way—the straight and mathematical way. They were in the topmost section of the topmost building of Computer City. The several hundred clean, solid, wedding-cake structures of the town could be seen from the polaflex window.

"The *All* circuit puts every machine in the city to work on any selection-problem that's fed

into our master control here. Each machine will give its answer in its own special terms, but actually they will all work on the same problem. To use a grossly simple example, let us say we wish to know the results of two-and-two, but we wish to know it in terms of *total security*. That is, we wish to know that two-plus-two means twice as many nourishment units for the Department of Foods, twice as many weapons for the Department of War, but is perhaps not necessarily true according to the current situational adjustment in the Department of Public Information.

"At any rate, we would set up our problem on the master, pushing the button *Two*, then the button *Plus*, and the button *Two* again as on a primitive adding machine. Then we would merely throw the *All* switch. A short time later the total answer to our problem would be relayed back from every computer, and the cross-comparison factors canceled out, so that we would have the result in terms of the familiar *Verdict Statement*. And, as everyone knows, the electronically filed *Verdict Statements* make the complete record of directives for the behavior of our society."

"Very interesting," said Mr. Tanter, the little crow-like man. He blinked rapidly, stared at the switch marked *All* that Krayton was pointing out to him.

Krayton now folded his hands

in front of his official gold-and-black tunic, looked up into the air and rocked gently back and forth on his heels as he talked. He was really talking to himself now although he seemed to address Tanter. "You can see that the Computer System is quite under our control in spite of what these rebellious, underground groups say."

"Underground groups?" asked Mr. Tanter mildly. Just his left eye seemed to blink this time. And the edge of his mouth gave the veriest twitch.

"Oh, you know," said Krayton, "the organization that calls itself the Prims. Prim for Primitive. They leave little cards and pamphlets around damning the Computer System. I saw one the other day. It had a big title splashed across it: **OUR NEW TYRANT—THE COMPUTER**. The article complained that some of the new labor and food regulations were the result of conscious reasoning on the part of The Computer. Devices to build the Computer bigger and bigger and bigger at the expense of ordinary workers. You know the sort of thing."

"But it is true that the living standard is going down all the time, isn't it?" asked Mr. Tanter, keeping his ephemeral smile. "What about those three thousand starvation deaths up in Hydroburgh?"

Krayton waved an impatient hand. "There will always be prob-

lems like that here and there." He turned and stared almost reverently at the long control rack. "Be thankful we have The Computer to solve them."

"But the deaths were due to diverting that basic carbon shipment down here to Computer City for computer-building, weren't they?"

"Now, there—you see how powerful the propaganda of the Prims can be?" Krayton put his hands on his hips. "That statement is not true! It simply isn't true at all! It was analyzed on The Computer some days ago. Here, let me show you." He took several steps down the corridor again and stopped at another panel.

"We first collected from the various departments—Food, Production, Labor and so forth—all the *possible* causes of the starvation deaths in Hydroburgh. Computer Administration had its machine translate them into symbols. We're getting a huge new plant and machine addition over at Administration, by the way.

"At any rate, we simply registered all the possible causes with the Master Computer, threw in this circuit marked *Validity Selector*. Out of all those causes The Computer picked the one that was most valid. The Hydroburgh tragedy was due to lack of foresight on the part of Hydroburgh's planners. If they'd had a proper stockpile of basic carbon the thing never would have happened."

"But no community ever stock-piles," said the little man.

"That," said Krayton, "doesn't alter the fundamental fact. The Computer never lies." He drew himself up stiffly as he said this. Then abruptly he consulted the chronometer on the far wall.

"Excuse me just a moment, Mr. Tanter," he said. "It's time to feed the daily tax computation from Finance. We have to start a little earlier on that these days—the new taxes, you know."

As Krayton moved off Tanter's thin smile widened just a little. As soon as Krayton was out of sight he stepped with his odd, crow-like stride to the numerical panel, punched two-plus-two, then adjusted the Operations pointer to HOLD. After that he punched three-plus-one, and HOLD once more.

He moved over to the *Validity Selector*, switched the numerical panel in, closed the circuit.

In his dry voice he murmured to the whole control rack: "Three-plus-one makes four, two-plus-two makes four. Three-plus-one, two-plus-two—tell me which is really true."

All through the master computer relays clicked and tubes glowed as the problem was sent to all the sub-computers in their own special terms. Food, Production, Labor, Public Information, War, Peace, Education, Science and so forth.

All over Computer City the

pulsed and throbbed along wires and channels. *Three-plus-one, two-plus-two—tell me which is really true?* The problem criss-solenoids moved their contacts and the filaments turned cherry red. Oscillating circuits hummed silently to themselves in perfect Q. The life warmth of hysteresis crossed in and out, around, about, checking, cross-checking, re-checking as The Computer 'thought' about the problem.

Which was really true?

Even before Krayton returned parts of The Computer had begun to get red hot. It hummed in some places and in the other places relays going back and forth in indecision made an unhealthy rattling noise.

Little Mr. Tanter beamed happily to himself as he recalled the words of an old directive The Computer itself had issued in the matter of public thought control. *When a brain is faced with two absolutely equal alternatives complete breakdown invariably results.*

Mr. Tanter kept smiling and rocked back and forth on his feet as Krayton had done. Before nightfall The Computer would be a useless and overheated mass of plastic and metal!

He took a printed folder from his pocket and casually dropped it on the floor where someone would be sure to find it. It was one of the pamphlets the Prims were always leaving around.

universe
in
books

by . . . Robert Frazier

A critical study of new science fiction hard-cover publications by a noted expert in the field of science-fiction fantasy writing.

SCIENCE - FICTION HANDBOOK by L. Sprague de Camp, Hermitage House, N. Y., 1953, \$3.50.

Seven years were to elapse after publication of a small trail-blazing symposium on the art of writing science fiction and fantasy before Hermitage House editor Gorham Munson felt the "need for a new book on the craftsmanship of the expanding genre of science fiction . . . a handbook so comprehensive and expert it is likely to stand alone for some time to come."

Just as a doctor and lawyer require a professional library, Gorham Munson believes a writer likewise needs his own set of instructional manuals. He had already published four practical writer's workshop handbooks precisely for such a professional library. The fifth volume in this series is L. Sprague de Camp's *Science-Fiction Handbook: The Writing of Imaginative Fiction*. The only definitive work in its field, it is a book about writing which is itself exceedingly well written. Included are hints on

Meet author-critic-teacher-editor Robert Frazier, who brings you a rundown on the newest science books. Instructor of the first college course in science-fiction-fantasy writing at the College of the City of New York, author of two books and eighty articles for magazines such as COSMOPOLITAN, CORONET and MAGAZINE DIGEST, Mr. Frazier has also found time to act as the science editor of PARADE, radio and electronics editor of AIR TECH, assistant editor of ELECTRONICS and editor-publisher of SPORTSWEAR.

how—and where—to sell science fiction.

Anyone wishing to write in this field now has a standard textbook, one that will save the new writer much error in his first trials with the genre and is not too elementary for profitable study by the pros. And it can be read by the science fiction reader for sheer entertainment as well as a source of priceless information. Simply a must for all.

MODERN SCIENCE FICTION, edited by Reginald Bretnor, Coward-McCann, N. Y., \$3.75.

Here is the first full-length critical treatment of science fiction, a first attempt to examine modern science fiction in its relation to contemporary science, literature and human problems. It consists of eleven essays on the significance and future of modern science fiction literature by such eminent people as John W. Campbell, Jr., Anthony Boucher, Don Fabun, Fletcher Pratt, Rosalie Moore, L. Sprague de Camp, Isaac Asimov, Arthur C. Clarke, Philip Wylie, Gerald Heard, and Reginald Bretnor.

The opening chapter by John W. Campbell, Jr., is an excellent bit of writing and a penetrating discussion of the historical development of the scientific state of mind. Reginald Bretnor asserts that the popularity of science fiction lies in the fact that it is first to adapt the scientific method

to literature and hence may revolutionize the entire field of literature. Another must for the fans.

THE BLACK STAR PASSES by John W. Campbell, Jr., Fantasy Press, Reading, Pa., \$3.00.

In the pantheon of modern science fiction there are few figures more outstanding than the brilliant editor-author John W. Campbell, Jr., whose new book is historically important because it is an early example of "space opera." Consisting of three connected tales involving Arcot and Morey (youthful scientists working for Transcontinental Airways) and Wade (a resourceful pirate of the skies), it deals with their development of the first successful space ship in the year 2126 and their first flight to Venus powered by a "molecular drive" developed by making all atoms go in one direction.

The book is a gadgety, fast-moving, cosmic-scaled super-science novel, yet its science does not retard the action. It is one of the smoothest, glibbest jobs of sugar-coated science to be found in an action-packed adventure yarn.

THE SYNDIC by C. M. Kornbluth, Doubleday and Company, N. Y., 1953, \$2.95.

Thirty-year-old Kornbluth has written a grimly realistic tale of a gigantic Mafia-like protective league, the Syndic, which rules the

eastern half of the United States. He got his idea from the Kefauver Senate Crime Investigating Committee's disclosure of the story of impeccably attired Frank Costello's twenty-billion-a-year crime cartel. Kornbluth, who recently has been writing about the problems staring humanity in the face as a result of technological advances, poses the question: What would the future be if this insidious criminal combine had actually succeeded in gaining control of our commerce, industry and government?

Under the highly productive, carefree, complacent and hedonistic rule of the Syndic, humanity never had it so good. There is plenty of money and people have fun with it. Taxes have been replaced by the "take" and other forms of shakedowns and graft. Sexual inhibitions have vanished. Polo is played in jeeps with 50-calibre machine guns used as mallets. The hopelessly corrupt North American Government has been driven into the sea. The early chapters have to do with shadowy, Machiavellian intrigue, are fast-paced, entertaining reading.

Unfortunately, he does not fully explore the startling sociological aspects of his basic theme, so this novel lacks the remarkable social insights which made his *SPACE MERCHANTS* one of the best books of 1952. For after the first few chapters, *THE SYNDIC* peters down

to little more than a long chase involving brain washing, witchcraft and murder in a plot that ranges from Druidical rites to old-fashioned twentieth century romance.

THE WHITE WIDOWS by Sam Merwin Jr., Doubleday & Co., N.Y., 1953, \$2.95.

KILLER TO COME by Sam Merwin Jr., Abelard Press, N.Y., 1953, \$2.75.

Haemophiliacs and female plotters, a rejected thesis and parthenogenesis, mixed in varying proportions, are the principal ingredients in *THE WHITE WIDOWS*. Parthenogenesis is a means of reproduction by the development of eggs from virgin females without fertilization by male sperm. It occurs in certain insects, crustaceans and worms. Haemophilia, the tendency to bleed for a long time before the blood clots, is a sex-linked hereditary disease occurring only in males but transmitted by females.

The theme is an interesting one involving the conspiracy of an underground band of women (all carriers of haemophilia) who cold-bloodedly set about to eliminate the need for men on this planet by employing parthenogenesis (virgin birth). This book includes all the favorite features of the thriller—the chase, the *femme fatale* (in this case three of them), murder and the mental

struggles of the hero to sort out the good guys from the bad.

The novel opens with two errors which make us reluctant, at first, to "suspend disbelief." It is unlikely that Larry, the hero, would not have possessed any inkling of Harvard's rejection of his doctorate thesis long before it was returned to him in the mail. What is more, he would have realized the futility of taking his thesis to Columbia because they could not possibly consider it unless he had been a student there for at least a year.

Almost simultaneous with publication of his *THE WHITE WIDOWS*, Abelard Press issued another Merwin thriller, *KILLER TO COME*, in which he intimately interweaves science, mystery and detection. Hank Sanford is convinced that Dr. Conrad was murdered because he was about to expose the attempted enslavement of the world by a sinister group who were working to shape the world's past, its present, and its possible future. And the killer was an agent, perhaps completely unconscious of his mission. Who? Hank had to find him soon for he knew that for him, too, there lurked a killer from an unknown space-time.

Perhaps because of the haste with which he was compelled to write both books, Merwin's characters seem prototypes rather than flesh-and-blood realities.

THE STAR SEEKERS by Milton Lesser, The John C. Winston Co., Philadelphia, 1953, \$2.00.

Lesser has come up with a truly different science fiction story. Assuming that Einstein's contention that nothing can travel faster than light is correct, it will take men traveling at a credible speed of 5,000 miles per second at least two hundred years to complete the flight across a twenty-six-trillion miles abyss of interstellar space to the nearest star, Alpha Centauri, 4.3 light years away. (Light travels at 186,000 miles per second.) This means that the original crew and passengers won't arrive at Alpha Centauri at all. They will have lived out their lives in a ship hurtling across the bleak emptiness of interstellar space, grown old and died in it. But their children will carry on, and *their* children after them. Not until the sixth generation nears maturity will the starship reach its destination, and they will have known nothing but the walls of the huge space ark.

What will be the sociological and other effects on these travelers? How will they live? What are the implications of time and isolation on their behavior, their lives, their thoughts and their beliefs?

Around this fascinating theme the author has woven an exciting tale for teen-agers of the first space ark's final days of flight.

Art in any form is a product of the cultural environment. And science fiction is a facet of 20th Century culture. It is no accident that Louis XV danced the minuet and not the tango, or that Italian artists of the Renaissance painted realistic Madonnas and not surrealistic abstractions. And it is no accident that science fiction flourishes in a society preoccupied with science and inventions.

Science fiction is a literature that explores all avenues of discovery and adventure which science has opened up to man, satisfying not only his emotions but his enquiring spirit as well. It is a tremendous force in moulding the modern mind. It is the first field to adapt the scientific method to literature. Science fiction possesses a significance extending beyond the area of literary trends and into that of social psychology. It evaluates the impact of science on society. It poses possible worlds with a philosophical extrapolation of utopian concepts.

"When a science fiction writer prophesies . . . he is bound to become a sociologist, even a Utopian," declares Waldemar Kaempffert, Science Editor of the New York Times. It provides us with a sense of humility before the universe.

"Writers of science fiction have always eschewed racial and religious discrimination," L. Sprague de Camp observes. "To one who ponders the problem of human relations with the Sirian spider-men, no being seems alien."

Science fiction attacks the most difficult and most frightening of man's problems, examines them and suggests logical solutions. The fascination of science fiction lies in the very fact that it presents conceptions rarely formulated, little explored, and likely to lift the reader completely out of the humdrum life of our world and into unique and stimulating adventures on planes and in time-streams never toured before. Every story is a unique imaginative experience providing exercises in creative thinking—calisthenics of the imagination.

Professor Walter Wrigley, Director of the Instrumentation Laboratory, Department of Aeronautical Engineering of the Massachusetts Institute of Technology assets: "For several years now some of us in the Instrumentation Laboratory have found science fiction not only interesting reading but also thought provocative from a professional point of view . . ."

The science fictions of yesterday are the facts of today.

Robert Frazier

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